# The Builder.

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### *Working-Men's Insurance.**

THE Workmen's Compensation Act, which comes into operation on July 1, has attracted, both during the time when last year it was passing through the Legislature, and the present intermediate period before it comes into effect, great attention to the subject of working-men's insurance. But it must be confessed that most people have considered this question chiefly from a business point of view. That is to say, masters have regarded it from the point of view of those who will largely have to pay compensation; workmen as those who will receive money; insurance companies as those who will have to make money by indemnifying capitalists. We are apt, too, to look at the subject in too contracted a manner, not to allow our gaze to have a sufficiently wide range. If we endeavour to take a bird's-eye of the subject throughout the world, we shall be astonished at the immense importance of it. It is one of the vastest and most striking of modern movements—it affects the happiness and the well-being of millions of men.

It is now possible to take such a view with the assistance of the work, which has been just opportunely published, and the title of which is placed at the foot of this article.* This is one of an American series—the Library of Economics and Politics—and it is written with that clearness and power of grasping facts and of generalisation which is so conspicuous and admirable a feature of the legal literature of the United States.

It is very desirable that the subject should be regarded from the practical and historical point of view, for too often it is discussed with no little prejudice. For example, we are told that compulsory insurance and the intervention of the State is Socialism pure and simple: and in Europe at least the very uttering of this word terrifies many persons. But "the modern movement for insurance represents the effort to substitute for the old relief fund institutions founded upon scientific principles, whereby each working man provides by regular payment for the relief he will probably need. The significance of this difference can be seen in the use of the word insurance instead of relief." Let us look at this a little more in detail. A working man who, either by accident, sickness, or age, is prevented from earning money, and has saved none, without a proper system of workmen's insurance has three courses open—he may starve, he may beg for charitable relief, he may go to the workhouse. As regards the latter, what is its basis? Pure Socialism. Those who have property have to pay poor rates, from which paupers are supported in their old age, either by means of what we call outdoor relief or in the workhouses, which ought, by the way, to be termed poor-houses. If, however, the State by means of compulsory insurance obliges workmen and capitalists to put money into a particular fund, to which also the State contributes, it is obvious that this is not a bit more Socialism than the worse system of doles, or relief in a workhouse in old age, or in time of sickness. We desire to emphasise this point because we are convinced that there is an irresistible tendency throughout the world to a system of compulsory State working men's insurance.

It is obvious from this book that the subject is quite in an embryonic stage in the United States. This is natural; it is in old countries where there is less opportunity of making money for all comers that working men's insurance is most needful. Each country differs according to its age, its character, and many other circumstances. Thus, the scientific character of the German mind has had practical results, for it is in that country that the system of working men's insurance has been developed in the most complete and perfect manner. "To-day there is in practical operation a complete and harmonious system for the triple insurance of practically all working men of the Empire against accidents, sickness, old age, and invalidity." The rise of this system was based on three distinct circumstances—"the development of a political philosophy which accorded to the State the widest attributes for the purpose of improving social conditions; that of the rapid rise of a social democracy, which, impatient at the feeble improvement accomplished under the existing organisation of society, avowedly sought a complete destruction of the existing social fabric, in order to introduce a new regime; and that of the beneficial results already accomplished through partly voluntary and partly compulsory insurance societies." In fact, Germany was a field fitted pre-eminently for such a system, just as the strength of individuality and voluntary effort in Great Britain will cause difficulties for a long time to arise before such a system can be established in this country. That it will come into being sooner or later we cannot doubt but in every phase of life, in England, it almost a truism to say that everything is established in an irregular and almost a contradictory manner. Our constitution, our laws, and our social system have been created in a manner which, to the scientist, is positively horrifying. On the other hand, to the English mind there is something curious in the fact that it is to the works of philosophical writers such as Fichte and Sismondi that we must go for the first causes of the system of working men's insurance in Germany. What, however, in a word, is the present state of affairs in that country? Working men's insurance is the creation as an actual system of Bismarck, whose political object was, so to say, to take the wind out of the sails of the Socialists. In 1883 the Bill for compulsory insurance against sickness was passed; in 1884 that in respect of accidents. Five years later, in 1889, the Bill for Insurance against old age and invalidity became law. The subject is so large that it would be wholly impossible in this article to go into detail, but as showing the elaborate character of this system we may refer to the point of compensation for accidents. The amount is fixed "after a proper investigation by the organs of that trade association in whose jurisdiction the accident happens. Against this decision an appeal may be made at an arbitration court composed of two members of the trade association, two representatives of the injured workman and a presiding magistrate. In more complicated cases an appeal from its verdict may be made to the Imperial Insurance Department" (p. 62.)

Let us turn next, for another brief glimpse of the subject, to France, where the struggle between the principles of obligatory and

*"Working-men's Insurance." By William Franklin Willoughby, United States Department of Labour. New York: Thomas J. Crowell & Co.

voluntary insurance is being thoroughly fought out in the Legislative Chambers and the Press. In a word, there is no obligatory, or strictly speaking, State system of insurance—there are a great number of institutions, much faulty in system. Among these there are three State institutions—the Caisse Nationale des Retraites pour la Viellese, established 1850, for the provision of old age pensions, and a similar institution in case of death, and another in case of accidents. But these were established in 1868. "These, though State institutions, are purely voluntary in operation." So that they may be said to resemble in some sense our own Post Office Savings Banks, where a working man may put by a fund of his own to meet either sickness or accident. Of these institutions the first is the most important: Collective insurance, that is contributions both by workman and employer are allowed, and it would appear that it is chiefly to this system of collective insurance that the marked success of this bank is attributable.

Of course, both in regard to the different systems of France and Germany there are any number of interesting points—all bearing on the future of the great subject which we might well consider. Our object, however, has been rather to note the difference in the basis of the systems in force in the two countries. If we try to work at our own country, side by side with Germany and France, it would seem that we have advanced further than France, but not so far as Germany. We have a very complete system of mutual societies—friendly societies, as we call them—under Government supervision. That is to say, we have voluntary societies watched by the State. Then, in the Compensation Act of 1897, we have the liability of employers for accidents to workmen made so general, and we have mutual societies so recognised, as to have, in an indirect manner, made insurance compulsory. For the present, it is not likely that the system in regard to accidents will be placed more under the influence of the State, though those workmen who are now outside the Act of last year will in no long time be certainly admitted to its benefits. The question which is obviously the most important, which is pressing for solution, is that of provision for old age. That is to say, the country is rapidly becoming ripe for some system whereby the State shall step in at an early period in a working man's life, and not merely relieve him in a decrepid old age. The present system is unsatisfactory. It does not assist a workman towards helping himself. Its tendency, on the contrary, is to cause him to spend his earnings during health and strength, and then to throw himself on the State in his old age. It is obvious that the example of Germany is, therefore, of the greatest importance to this country, and nowhere will the system in force in that country be better learned than in the work on which this article has commented.

## THE PARIS SALONS.

IN spite of the fact that the two Salons, Old and New, are now both accommodated in one building, so vast is the space covered by the Galerie des Machines that there is no diminution whatever in the extent of the two exhibitions. The "Old Salon" occupies two-thirds of the building, the eastern portion, the New Salon the remainder, the two being divided by a neutral zone in the shape of an open space devoted mostly to luncheon tables, though a portion of it on the south side is appropriated to small objects of art, statuettes, &c.; and here the territory of the two Salons is divided by an architecturally-treated partition wall finished off gracefully with a columnar order and an acroterion at each end. The whole arrangement of the building and the design of the temporary partitions has been, we believe, in the hands of an eminent French architect, M. Loviot, and is highly creditable to his taste and discernment.

Neither Salon presents evidence of any special movement in French art since last year. As before, the Old Salon represents the more popular side of the art of painting—a vast heterogeneous collection of pictures illustrating all sorts of subjects, a considerable proportion of which are drawn from modern life, while the New Salon consists rather of pictures illustrating special effects or special theories of artistic treatment. Accordingly, the latter is usually spoken of as the more interesting exhibition by artists, and no doubt there are a great many commonplace and (in an artistic sense) vulgar works to be found in the Old Salon; but it must be remembered that the number of works is very much greater, and if the best were selected from them there are enough among them to make quite as artistic a collection as that of the New Salon, and perhaps a superior one in general power and interest.

The only special feature that one can notice as characteristic of the Old Salon of the present year is the rather curious one, considering the rationalistic temper of the French mind generally at present, of the presence of a larger proportion than usual of paintings of religious and biblical subjects, many of them on a very large scale. Some of these, including two or three of the largest, are decorative wall pictures for churches, painted in a flat fresco-like style; others are easel pictures in the usual pictorial style. From an artistic point of view none of them are of the highest class, if we except M. Hippolyte Flandrin's picture of the Vocation of St. John and the return from Calvary, painted for the chapel of Saint-Jean des Sulpiciens, a fine work both in decorative effect and in feeling; the left hand compartment, intended to illustrate the passage, "From that time that disciple took her into his house"—the return of St. John to his own house with the mother of Christ, is singularly beautiful in the dignity and pathos of the two figures. Most of the other decorative paintings for churches, though well composed and drawn, are cold and destitute of interest.

Apart from these ecclesiastic works, however, decorative painting on a large scale, the form of art which directly connects painting with architecture, is well illustrated in the Old Salon: one whole room is filled with M. Cormon's paintings and studies for the decoration of the new Natural History Museum, which form a very remarkable collection. The ceiling, which is completed, represents the leading races of mankind; the primitive man in the foreground; on the left, in the next plane of the picture, the Aryan race under the guidance of Greece; on the right, balancing them, the Semitic races; in the background the types of coloured peoples. The studies for wall panels pourtray the historic development of life on the earth, [commencing with] the animals of early geologic time, then pourtraying the developments of the human race from the primitive man through various epochs; many of these latter designs are [at present only in sketch form. This, when completed, will be a most remarkable example of the illustrative use of decorative painting in a public building. How one wishes that one could see the Government of this country, or the London County Council, engaging eminent artists to carry out such a scheme as this in a public building. The decoration of St. Paul's is the only thing of the kind on a large scale that has been done, and that with no assistance from public funds. The next most important in size of the decorative paintings is M. Rochegrosse's great picture for the staircase of the library at the new Sorbonne, "The Song of the Muses awaking the Human Soul." This is in a somewhat more academic style, more so in fact than one would have expected from this painter; still, there is a certain grandeur about it. The Muses, in a closely compact group, float onwards in the air through the middle of the picture, past a foreground on which various figures typical of uncultured mankind appeared to be aroused and attracted by their song; a savage looks up from a hand-to-hand fight as if half inclined to let his victim escape; in the centre of the picture the typical woman of the cultivated ages is in the act of starting up as if called into being. The colouring, like the design, is somewhat academic; but the whole thing has an effect, and will look well in its place. Then there is M. Raphael Collin's very pretty design for the small Salon of the new Opera-Comique, "The Harmonies of Nature inspiring the Composer," which in fact they do not do, but one may accept the idea as an excuse for a picture. M. Collin gives us what may be called a decorative woodland scene—woodland scenery treated in a very subdued conventional manner, with the composer standing in an open lawn in the foreground, while the "Harmonies of Nature" are represented by two figures floating past. M. Gervais has also given himself this year to decorative painting, not for a wall but for a ceiling, in which, according to the usual French programme, nude figures float about amid clouds in an aimless manner; one or two of the figures are very fine specimens both of drawing and colouring; but this is, to English eyes, an unsatisfactory employment of the powers of a gifted painter. The French notion of a ceiling painting is always pretty much the same; clouds and a blue sky, and people reclining on the clouds or flying up into the sky; and, too often, balustrades or columns painted in upward perspective as if standing vertically above the ceiling. This taste in ceilings seems to have sunk into the French mind and to be ineradicable; we see specimens of it every year; M. Marioton, who is an old hand in this work, has his ceiling as usual, this time under the title "Les Songes" (they are all pretty much alike, although the names differ); but then M. Marioton's talents are just about suited for this kind of work, while M. Gervais is worth something better.

To see the best of the other decorative paintings of the year we must cross over into the New Salon, where the prince of decorative artists, M. Puvis de Chavannes, has his realm, and exhibits this year a large upright panel intended for the Panthéon, representing

Ste. Genevieve watching over the sleeping city, standing on the roof of a building, perhaps the Panthéon itself (formerly the church of Ste. Genevieve), the composition being filled up by the parapet, the wall of the tower, and the view of the city below, rather indicated than clearly shown. Comparing this with some of M. de Chavannes' great classic subjects in decoration (several of which have been illustrated in the *Builder*), this is a disappointing work; the lines are rigid and angular, including that of the figure of the saint herself, who is perhaps purposely designed with this stiff attitude and vertical line to harmonise with the general design, but it does not make her an interesting figure. The picture is surrounded by a very prettily designed decorative border. In the New Salon also is a large and in its way important piece of decorative work for the wall of the lecture-theatre of zoology at the Sorbonne; this is of inferior intellectual interest to those already mentioned, being a kind of section of the sea with a number of huge marine growths painted on it, as if seen through water; hardly a picture, but an effective and suitable method of treating a wall in a manner symbolic of the use of the apartment in which the work is carried out. M. Fourié exhibits also a decorative picture painted by commission from the State, for a situation at the Hôtel of the Ministry of Agriculture; this however is hardly a decorative picture in the usual sense, being a landscape in perspective, occupied by figures engaged in rural occupations, a fine strong peasant girl in the foreground, and a ploughing group immediately behind. This is painted in a somewhat flat and dry kind of execution, to avoid the look of an easel picture, but as far as design goes it is an easel picture. Two or three decorative landscapes are exhibited, an idea very alien to English habits of artistic perception, and they are not all equally successful; but one, by M. Montenard, which takes for its keynote a line from Virgil, our old Latin Grammar friend—

"O fortunatos nimium sua si bona nôrint"—

is really fine, and succeeds in being decorative in character without reducing landscape to a flat plane. It represents Virgil in the foreground looking after a group of peasantry going down the steep road, a large tree spreading over the foreground and filling a good deal of the picture; the decorative style is realised by treating the landscape in broad spaces of colour with little detail, and great attention paid to line; thus it is removed from the category of *picture* landscapes, and assumes a kind of conventional style suitable for a wall-painting. It is a kind of attempt seldom made in England, and perhaps rather a risky one, but in this instance the result is a success. It is intended for the "Hôtel des Agriculteurs de France," and is, we presume, another Government commission.

Among historical pictures in the old Salon the most important is M. J. P. Laurens's "The Arrest of Broussel," a large life-size picture of a set of soldiers coming down the staircase of a public building, the prisoner bareheaded, walking with them. This has all the dignity of style and dramatic effect which always characterise M. Laurens's paintings of this class. Otherwise, historical painting is rather at a discount; the most noteworthy work, next to the one just mentioned, which might be grouped as historical, is M. Tony Robert-Fleury's "Sous La Terreur — une perquisition." This is a very original work; not a scene crowded with figures, as one might expect; it is the passage in the interior of a house, where one terrified lady leans against the door of a closed room listening to what is happening; a treatment that is more suggestive than many more elaborate paintings of scenes in the Revolution have been. Amid the mass of pictures of all kinds (more than two thousand in number) collected in the Old Salon, it is only possible to name a few of those which are especially effective and should on no account be missed. Among these is the "Hercules" by another member of the Laurens family, M. Pierre Laurens; a picture noteworthy because it contains a new idea. It represents what was really the true Greek idea of Hercules, as the busy indefatigable worker for mankind, tramping along in a great hurry through the twilight landscape, with a stormy sunset behind, to be in time for his next piece of business; not a great brawny man, but a large solidly-built youth with a refined Greek face, and a formidable club over his shoulder. The picture is heavy in colour, but it is a really fine conception which gives us a new idea of a great legendary personage. Coming from legend to modern life and realism, one of the finest things in the whole exhibition is Mdme. Demont-Breton's "Dans l'eau bleue," a life-size painting of a young girl, a child, waist-deep in the sea and struggling to wade through the waves, her face flushed with her exertions and with the cold of the sea-water. As a representation of a moment of actual life and incident this is absolutely perfect; there is no sentiment and no story in it, but it is the real thing, it is like looking through a window at the sea and the figure. In this power of depicting movement, action, and character in a simple incident Mdme. Demont-Breton is one of the greatest of living painters, and she has done nothing more complete in its way than this. In a very different way, and almost equally good of its kind, is M. Ridel's "Pensées d'Automne," two young ladies reclining on bank in an autumn landscape, painted in very delicate tones and with much originality in colour treatment; the picture is realistic in a sense; the figures are clad in orthodox Paris dresses, but all the details are kept subordinate and refined away, so that nothing strikes the eye crudely or interferes with the sentiment of the scene and the melancholy expressed in the face of the beautiful young woman whose gaze is fixed on the distant landscape. This is a work quite above the ordinary level of paintings from subjects of real life. The two very small interior paintings by M. Lecomte, "Consolation" and "Femme épluchant des legumes," should be looked at as remarkable examples of miniature cabinet pictures full of small detail, but without the least touch of hardness, and very effective in the management of the lighting; they are both lamplight interiors. M. Debat-Ponsan has painted a vigorous allegorical picture of Truth ready to leap from the coping of her well, while two figures, an ecclesiastic (apparently) and a masked bravo, are trying to drag her back again; their realistic costumes contrast oddly with the nude figure of Truth, but the spirit of the work saves it. Two small pictures by M. Fantin-Latour, "Andromeda" and "Le Lever," painted in the characteristic broad style of handling which is entirely his own, are of the highest artistic quality, the latter especially, which really recalls Rembrandt in composition and effect, though different enough in handling. M. Leydet's "Avant le Messe," a study of the expressions and characters of a row of peasant women, life size, waiting at the church, is a fine and serious work. Among the nude studies—those which may be called simply studies of the figure in various lights, there are fewer commonplaces than usual, and some very fine works; among them, in the Old Salon, Mr. N. A. Laurens's "Sous la Vague," two women on the margin of the sea waiting for a wave to break over them, whose figures are admirably drawn. In the New Salon are some charming small pictures under different names, by M. Stewart, a French-American artist, all with the same *motif*—the figure seen under broken light through trees, and all not only good in execution but more or less poetic in feeling. M. Houyoux, life-size picture, "Baigneuses," is a capital broad piece of painting of the figure in open-air light.

In the New Salon is one of the most remarkable pictures of the year—M. Dagnan-Bouveret's Supper at Emmaus. The subject is treated in a peculiar and semi-mystic manner; the figure of Christ, facing the spectator, sheds a soft golden light over the background; the disciples, at each side, look up with adoration; but the peculiar feature is the introduction at one side of a small group of people in modern dress, father, mother and child, looking on at the scene. This incident, a common kind of feature in Renaissance painting but very strange at first sight in modern art, of course puts the whole thing on quite a different plane; it is not so much a representation of the scene as a vision at which we look on, in common with the spectators represented at the side; and this incident certainly adds very much to the interest of the whole work. Another work of considerable interest is M. Friant's "Douleur," in which the artist has endeavoured to make a picture of the unpromising subject of a set of very commonplace but good old ladies in deep mourning by the side of an open grave, two of them endeavouring to support and console the chief mourner, who is nearly succumbing under her feelings. The group is life-size, and in spite of the difficulty of the mass of black dresses and the totally commonplace character of the faces, there is a real and natural pathos in the figure of the poor old lady bowed over the grave which makes its mark, and justifies the choice of the subject. In the New Gallery also is one of the most important of the pictures purchased by the State, M. Cottet's "Aux Pays de la Mer," a triptych picture in which the centre represents a farewell supper before the fishing crews put out to sea, while the smaller side compartments represent on one side "Ceux qui s'en vont," and on the other side "Ceux qui restent," the wives and daughters, namely, on the dark sea shore looking out into the night. This is a fine and pathetic picture made out of an event of real life. It is noticeable that, for the present at least, the pictures purchased by the State from the annual exhibitions are nearly all pictures with a moral, as one may say, or pictures of actual life among the poorer classes; another that has been purchased this year (from the Old Salon) is one

representing the old superstition, still in vogue on the coast and in fishing towns, of offering up a votive ship in the church, either as a thanksgiving for escape from shipwreck, or as a charm against that danger. It again strikes one as curious that a Government so very anti-religious as the French Government is at present, should nevertheless in its purchases appear to encourage popular superstitions of this kind; and should generally appear to consider the moral of a picture rather than its purely artistic quality. In purchasing pictures for presentation to popular institutions the Government may perhaps be wise in following this order of choice, but it strikes one as singularly in contrast with the known feelings and opinions of the educated classes in France at the present time.

Portraiture is not very strongly represented this year. M. Benjamin-Constant has two admirable portraits of the realistic order, one of M. Hanotaux of the Académie Française, the other of a French gentleman standing in the middle of his ancestral park; the latter a work that rather reminds one of Millais. There are a good many good portraits, but not many others that can well be called remarkable ones, if we except M. Humbert's portrait of M. Jules Lemaître at his writing-table, a work of remarkable vivacity; and M. Aimé Moret's large equestrian portrait of "Prince d'A——," the artistic value of which is chiefly in the painting of the horse. In landscape there are many fine works, although there is a current talk, in which we cannot concur, that landscape is poor this year. A finer work than M. Harpignies' "Le Teverone," with its grand calm and its beautifully considered distance tones, it would be difficult to find. M. Didier-Pouget has a large and striking work "Le Matin—Vallée de la Creuse," in which a very powerfully lighted foreground, the slope of a hill in strong light, throws off into the distance a wooded valley half seen through a mist of hazy morning sunlight. There are a good many other fine landscapes, the larger ones being mostly in the Old Salon (except the decorative landscapes before mentioned); the New Salon contains a good many very interesting small landscapes, among which those of M. Cazin are pre-eminent as examples of style and breadth in the treatment of landscape; no one should visit the exhibition without looking at these.

Among the scanty sculpture exhibits of the New Salon one work, the plaster model of the so-called statue of Balzac by M. Rodin, to which reference has already been made in our columns, is exciting more public attention than any other work in the Salon. M. Rodin appears to have had the idea of representing the great novelist in a long cloak or dressing gown, a good enough idea in itself, seeing that Balzac's figure was not of sculpturesque appearance or proportions; but what he has sent in is a rough sketch or impression of a face at the top of a shapeless block of plaster, in which not even the slightest indication of a modelling of drapery has been made. As a sculptor's first rough sketch it might be taken as the promise of a remarkable and original work; as a work for public exhibition it is ridiculous. Nevertheless, the admirers of M. Rodin assert that it is a great work as it stands, and are organising a committee to collect 30,000 francs for its purchase in the hope of setting it up in some public place in Paris, which it is not the least probable they will obtain permission to do. A rich "Industriel," who is an admirer of the paintings of Manet, has also offered to purchase the work as it stands from the sculptor. In short, both the sculptor and his friends seem to have gone a little out of their minds on the subject. The sculpture in the Old Salon is as large and, on the whole, as fine a collection as usual. The enormous quadriga and groups of horses and riders, by Mr. Mac-Monnies, the American sculptor, is the prominent object; this is to be set up at the entrance of Prospect Park, Brooklyn; but, though there is a certain grandeur about it, it seems rather a revival of a worn-out classical conception, somewhat out of place in modern days. It is a disappointment to find that M. Mercié exhibits only two small works, a bust and a statuette, and that M. Falguière, instead of one of the fine ideal nude statues in which he is supreme, sends only a great plaster model of an archbishop in tumultuous robes, which is neither interesting nor sculpturesque. M. Peynot's monument to Cardinal Bernadou, on the other hand, where the Cardinal is represented kneeling on the top of a great sarcophagus pedestal, with the robes very finely treated, is a powerful and impressive thing; and M. Soulés exhibits a very beautiful group, a monument to a child, comprising the dead figure of the child, the mother kneeling on one side and an armed angel on the other side. Monumental subjects are rather predominant this year; two or three sculptors have imitated M. Mercié's rather favourite device of a mourning figure in bas-relief, relieved against an upright slab bearing the medallion portrait of the deceased in the upper corner; M. Desvergnes' work of this type is very beautiful, but he owes the idea to Mercié. M. Puech's large monument to Francis Garnier, consisting of a bust on the top of a large circular stele, around which are grouped three colossal female figures whose feet fly out into the air on all sides, is no doubt spirited and original, but wants repose and concentration of line. M. Gauquié has achieved a really fine and graceful monument in which architectural form and detail is combined with sculpture; it is a lofty erection in Louis Quinze style, compounded of architectural scroll work combined with Cupids and garlands and other usual properties, but designed with a very fine eye to line and proportion, and supporting at the top the head and bust of a lady; "Monument Clairon, pour Condé-sur-Escaut" is the title. Among the works of purely ideal sculpture is a perfectly modelled figure in grey veined marble, by M. Boucher, representing the "Philosophy of History," writing on an upright slab towards which her face is turned; a beautiful work both in modelling and in the fine expression of the head. M. Gustave Michel's "Dans le Rêve" is a large marble figure of a half-draped woman of singular beauty of form, though not with the intellectural interest of M. Boucher's work. M. Moncel has produced an expressive group of a young man and woman under the title "Vers l'Amour," belonging to the sentimental order of sculpture, and which has been purchased by the Corporation of Paris. Among other fine works of ideal sculpture are M. Cornu's figure entitled "Douces Langueurs," M. Charpentier's "Douleur," a female figure crouched against and half under a rock; M. Eugéne Marioton's "La Force protégeant Le Droit," a vigorous work in which the principal figure has something of the masculine power of Donatello's St. George; and M. Leclaire's "Le Premier Amour," a group of great passion and tenderness of expression. But there are many other works of great interest; studies of various aspects of human life and expression, some very fine pieces of animal sculpture, and a number of interesting and charming fancies, not belonging to the first order of sculpture, but all with their own individual interest. One of the great sources of interest indeed, in French sculpture, is the amount of thought which is put into it; and in this respect the sculpture collection of the present year is not behind most of those which we remember.

## NOTES.

The Sewage Commission.

THE appointment of a Royal Commission to inquire into the disposal of sewage will doubtless result in an interesting Report. It will make glad also the hearts of a large number of people with various "fads" on this question, who will have an opportunity of pressing their views on this body. Of its practical utility we have some doubt. At present the trouble is not so much ignorance of the best modes of disposing of sewage as the fact that a large number of local bodies and of individuals will not take those measures for its disposal which are clearly known to be desirable. The elections for Urban District Councils are constantly fought upon the question as to whether or not there shall be a sewage scheme, the opponents of which are usually victorious, until at length, by the pressure of disease, or of the Local Government Board, some scheme becomes inevitable. We have no doubt also that the appointment of this Commission will be used as a reason for delay by many local bodies who prefer not to spend money on sanitary work if it can be helped. They will say, with some show of reason, that if they spend their money before the Report is issued, the latter may result in some recommendations which may affect their scheme. We trust that the Local Government Board, however, will not allow this excuse to be of any avail.

The Geological Museum.

THE proposal to remove the Museum of Geology from Jermyn-street to South Kensington should be stoutly resisted. It is not only a museum, but the headquarters of the Geological Survey of Great Britain. It is at this place that those who require information as to the character of the ground in any part of England can always get it, not only gratuitously, but of a kind which is as near as possible up to date and impartial. Mine-owners, engineers, owners of property, and many others constantly come to this office for information. Does a Local Authority intend to make a reservoir, the place where they go for information and advice as to the nature of the ground is the Geological Museum. The mania for sending everything to South Kensington is absurd. The Museum of Geology is admirably placed: it is central and accessible; but if the Museum has not sufficient space in Jermyn-street, then a new site should be found in Westminster. Its officials are doing useful and unobtrusive work. It would be sheer foolish-

ness for the Government to remove it to South Kensington, and we trust that a resolute and successful stand will be made against its removal to that place.

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A New German Architectural Paper.

WE have scanned with some curiosity the first number of the *Berliner Architekturwelt*, a new monthly periodical dealing with "architecture, painting, sculpture, and art-workmanship" (but chiefly, apparently, with architecture), published by Ernst Wasmuth, the well-known architectural bookseller of the Markgrafenstrasse, Berlin. The publication is in quarto form, and the number to hand has thirty-two pages of mixed letterpress and illustrations well printed on highly-glazed paper. The illustrations are mostly from photographs and washed drawings, with a few plans to a very small scale. But what arouses our curiosity is that, unlike the older German architectural periodicals, this new venture deals solely with what we are accustomed to call architecture in this country, and with decoration; and entirely ignores the work of the engineer. The editors say they propose to look at things from a "purely artistic point of view," and as one must suppose they know, or have good reason to think, they will find adequate support among German architects, the question arises whether that unfortunate divorce between architecture and engineering, between the fine art of building and the science on which it ought to rest, which long ago took place in this country, is now beginning in Germany. Hitherto architects and engineers in Germany have been trained together, and in their subsequent careers have hardly been distinguishable, except as specialists in particular branches of a united profession; and, though the success of the system from an æsthetic point of view has not always seemed perfect, there can be no doubt whatever that it is sound in principle—that the artist, whether he be architect, painter, sculptor, musician, or whatever he be, should be thoroughly master of his materials, and of the best ways of using them. It is unfortunate for the architect that this is so difficult in his case, but that does not relieve him of the obligation, and we should see with regret that the severing the study of architecture from that of the highest forms of construction had extended to Germany.

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Austrian Archæological Institute.

WE welcome the first instalment of the *Jahreshefte* of the Austrian Archæological Institute which has just appeared. The *Jahreshefte* takes the place, on a much more ample scale, of the old *Mittheilungen* which was, for the most part, concerned with local or Austrian archæology. The new periodical will also be the official organ of the new Austrian Institute at Athens. It is edited by Professor Benndorf. The aims and objects of the new Institute, as defined in the official programme, are as follows:—1. To undertake archæological expeditions and excavations. 2. To publish the scientific results of the same. 3. To undertake the supervision and direction of independent collections of antiquities. 4. To superintend the work of all archæological students in receipt of State subsidies. Perhaps the most important article in the first issue of the *Jahreshefte* is that by Dr. Reisch on the Athene Hephaistion, *i.e.*, the image of Athene which Pausanias (I. 14. 6) describes as standing near the god Hephaistos in their conjoint temple beyond the Kerameikos. Dr. Reisch holds, with Dr. Dörpfeld, that this temple was unquestionably the actual temple commonly known as the "Theseion." By the help of inscriptions referring to the making of the statue, he believes that he can detect in several replicas the pose and motive of the original group.

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Proposed Museum at Spalato.

AN important work is to be undertaken at Spalato. This will be the erection of a Central Museum, in which the collections at present scattered among four buildings will be brought together: including the objects found at Salona and in the palace of Diocletian, and the Museum Library of six thousand volumes. The authorities stipulate, however, that the town of Spalato should purchase the site selected for 20,000 florins, adding that, should the town refuse to do so, the entire museum will be transferred to Salona, where a site has been offered for nothing. A lively interest is taken in the matter in the town, whose citizens are anxious to preserve the museum within their own walls. The most satisfactory solution, as it appears to the Council of Spalato, seems to be to call on the citizens to raise money for the building of a church. Diocletian's Temple of Diana, which at present does duty as the cathedral, would thus be set free and be put, as a ready-made building, at the disposal of the Museum authorities.

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Electric Meters.

THE raising of the pressure of supply from 100 to 200 volts by many supply companies has made their engineers demand very accurate meters. As the current taken by the lamps at the higher pressure is only the half of what it was at the lower, continual testing of the meters, especially for starting current, is rendered necessary. Mr. Gibbings, the engineer to the Bradford Corporation, in a paper recently read before the Institution of Electrical Engineers, mentioned that of the 461 meters ordered in 1897, 219 failed to pass his tests and had to be sent back to the makers. The accuracy of an electric meter has to be greater than that of a gas meter, but as the mechanism of the former is as a rule more complicated, it is more easily upset in practice. In one type of electric meter the effect of an overload due to a temporary short circuit is to make it read high permanently, whilst in another type the opposite effect is produced. The current at which the meter will start also generally increases the longer the meter has been in use. Hence the meters demand continual attention, and are a source of worry and constant expense to the supply companies. Mr. Gibbings has apparently solved his difficulties by inventing a meter of his own which is very simple in theory and has the merits of cheapness, simplicity of calibration, and the fact that it will register any current, however small. He uses what is practically a water voltameter, and the number of units consumed is shown by the diminution in the height of the acidulated water in it, the rest of the water having been converted into oxygen and hydrogen. He has made a thoroughly good meter, the only point on which we have doubt is as to its durability. The *life* of glass voltameters in physical laboratories is notoriously short.

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Treatment of Sewage Containing Manufacturing Refuse.

MESSRS. Dibdin & Thudichum recently communicated a paper upon this subject to the Society of Chemical Industry. After referring to a former paper dealing with the bacterial treatment of the sewage effluent at the Northern Outfall Works at Barking Creek, the authors give the results of the bacterial treatment of a purely domestic, but very strong sewage at Sutton, of a sewage containing much "iron pickle liquor" at Leeds and West Bromwich, and of sewage containing organic refuse of an obnoxious character from leather-dressing works at Yeovil. The authors conclude with the important statement that "so far as our experience has gone, such sewages can be efficiently purified by the bacterical method equally with the domestic sewage from a purely residential neighbourhood." An interesting discussion followed the reading of the paper, and General Sir H. Prendergast mentioned that Yeovil sewage was known to be one of the foulest in the world, and that although the results of its bacterial treatment had varied at first, owing to the imperfect construction of the filters, it was now hoped that the process would prove successful.

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The Grecian Theatre and Shepherdess-walk.

THE Charity Commissioners have made a scheme in respect of the "Bishopsgate Foundation" charity, for granting building leases of "The Eagle" tavern, the site of the Grecian Theatre, six almshouses, and the houses numbered 16-48 (even), in Shepherdess-walk. Nos. 1-25 (odd), Nile-street, and some other adjacent property, at annual rents amounting to 3,500*l.*, the lessee agreeing to expend in building a sum to yield a rack rental of 17,500*l.* per annum. "The Eagle" tavern stands on the site of "The Shepherd and Shepherdess" tea-house and gardens, a popular resort in the closing years of last century; the adjoining theatre was built by Thomas Rouse, in 1841, and was reconstructed and enlarged in 1858 by Benjamin Conquest. In 1876-7 a larger house was erected, the site of the dancing-hall being included, for his son, George Conquest, by John Garrud, of Spitalfields, contractor, from Mr. J. T. Robinson's plans and designs, with a stage, including the scene-dock, 60 ft. deep, a gallery with 1,500 seats, and a total capacity for more than 4,000 persons. On November 3, 1877, we published a plan and a view of the new premises, opened on October 29 of that year. In May, 1882, the lease of the tavern, the pleasure grounds, and the theatre, expiring in the course of the current year, and held at a rent of 365*l.*, was offered for sale by auction, but withdrawn after a bid of 18,000*l.*, the reserve price being 21,000*l.*

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Hanover Lodge Regent's-park.

IN pursuance of an order made by Mr. Justice Kekewich, in the High Court of Justice, Chancery Division, the Crown leases of this property will be offered for sale next week. The house, formerly occupied by Admiral the Earl of Dundonald, was built in 1825, in the classical style, from, we believe, the designs of Burton, architect of the adjacent "St. Dunstan's Villa" and "Grove House." The grounds, being 5 acres in area, lie

between the Regent's Canal and the Outer-circle, and extend northwards for a considerable distance from near Hanover-gate to the foot-bridge, across the canal, beyond "St. Dunstan's." The canal was projected by Nash, in conjunction with his scheme for laying out this portion of the old Marylebone-park after the expiration, in 1811, of the lease to the Duke of Portland, to connect the Grand Junction Canal at Paddington with the Thames at Limehouse. The Regent's Canal was made in 1812-20, by James Morgan, engineer, who had been Nash's clerk, and laid out the Marylebone Farm and Fields after Nash's plans. Nash was at that time architect and surveyor to the Woods and Forests; the new works were begun in 1812, nineteen years having elapsed since, in July, 1793, the Treasury had instructed Fordyce, Surveyor-General, to offer a premium of 1,000*l.* for the best plan of laying-out the estate. Nash's proposal included lines of terraces, the circuit being completed by the canal in a cutting, and various detached villas, with a reserved central space for a royal palace; it was eventually preferred to a scheme propounded by Leverton & Chawner, architects and surveyors to the Inland Revenue Board, which provided for buildings of a more urban description.

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An "Old London" Collection.

DURING this week has been dispersed at Sotheby's the first part of a notable collection of drawings, prints, engraved portraits, &c., gathered by the late Mr. J. Holbert Wilson, of Onslow-square, to illustrate the architectural, historical, and social history of London. Whilst not equal, in point of intrinsic value and importance, to Mr. Gardner's, which contains much that will not be found elsewhere, it includes many water-colour drawings by G. and T. Hosmer, Shepherd, C. Tomkins, Finlay, R. Godfrey, J. Buckler, and others, of lesser known and now demolished places whose names, rather than their aspect, are familiar to students of the town's topography. J. H. Shepherd's views of the "Red Lion" in West-street (formerly Chick-lane), the purlieus of the Fleet Ditch, the galleried inns, and "Slaughter's" in St. Martin's-lane, with Archbishop Tenison's Library (by Wren), Turner's birthplace, No. 26, Maiden-lane, and the Lord Mayor's banquet-house (Stratford-place) are very interesting. We may mention also the views of the old Pantheon, in Oxford-street, St. Martin's Round-House, Smithfield, Whitehall, Old Brompton, the tea-gardens, and the old theatres, schools, and prisons. Three of perhaps the rarest views are that of the interior of the Red Bull Theatre, Clerkenwell, engraved from Kirkman's Drolls, that of Bagnigge Wells, by J. R. Smith, after J. Sanders, and Toms's south prospect of Pancras Wells, showing the gardens south of the old parish church, where Stukeley laid his Roman camp. Some of Shepherd's drawings are replicas of those he did for Frederick Crace, whose collection was sold for (we understand) 3,000*l.* by his son, the late J. G. Crace, to the Government, in December, 1879.

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Exhibition of International Art.

THE exhibition opened at the Knightsbridge Skating Club hardly bears out this high sounding title, since it consists of a collection mainly of works of the "irreconcileable" school by artists of different nations; but amidst a great many absurdities it is wide enough to include a good deal of work which is of real interest, though many of the best things are not new. Mr. Whistler exhibits a group of his works, including one of his best works, the life size portrait of a lady called an "Arrangement in Black," also a small work in his worst way, the little sketch called "The Philosopher," to the name of which in the catalogue the artist, with his characteristic assurance, appends the quotation from the *Athenæum*, "an unpleasing thing"; as if this were enough to disgrace the *Athenæum*, whereas most sane persons will at once adopt the verdict as perfectly justifiable. There are some fine works by Mr. Lavery, Mr. Mouat-Loudan, and others of the new school of artists, and some interesting ones by artists less known; also some sculpture studies and sketches by M. Rodin, some good statuettes by Mr. Mac-Monnies (though we cannot accept his Venus whose hair has been done in curl-papers), and some pretty bas-reliefs by Mr. Havard Thomas. The vestibule includes a number of sketches and studies, many of them of high character, and a collection of the black-and-white drawings of the late Mr. Aubrey Beardsley, which it is just as well to have exhibited in a collective form, whatever may be one's opinion of the type of art which they represent. The exhibition is at all events quite worth a visit.

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## THE ROYAL INSTITUTE OF BRITISH ARCHITECTS:

### LIBRARIES OF THE MIDDLE AGES.

AN ordinary general meeting of this Institute was held on Monday, at No. 9, Conduit-street, Regent-street, Mr. H. L. Florence, vice-President, in the chair.

The minutes of the last special meeting, and the annual general meeting, having been taken as read, Mr. Jan Stwyt, of Amsterdam, was introduced to the meeting.

The Chairman remarked that it was always a pleasure to find that their meetings were sufficiently interesting for foreign architects to come before them.

The Secretary then read the following names of candidates recommended for admission, as Fellows: Mr. M. F. Cavanagh, Vice-President of the West Australian Institute of Architects, of Perth, West Australia; Mr. J. J. Thomson, Chelsea; Mr. C. E. Bateman, President of the Birmingham Association, Birmingham; Mr. J. Souttar, of Aberdeen; Mr. F. W. Lacey, M.Inst.C.E., of Bournemouth; Mr. G. C. Sherrin, London; Mr. W. B. Gwyther, Assoc. M.Inst.C.E., of the Public Works Department, Bengal Secretariat, Calcutta. As Associates: Mr. G. Benson, President of the York Society, of York; Mr. F. Peck, of Kingston Hill. As Hon. Fellow, Sir Edward John Poynter, President of the Royal Academy.

The Chairman then called on Mr. T. G. Jackson, R.A., to read a paper on "The Libraries of the Middle Ages," of which the following is a summary:—

In a preliminary allusion to the libraries of the early middle ages, when books were so rare and precious that the greatest care was necessary in their storage, Mr. Jackson said that the only large collections must have been those in the cloisters of the religious houses or collegiate churches. The earliest went back to the time of St. Benedict, in the sixth century; though there was one at Jerusalem in the third century, and the church at Hippo inherited the books of St. Augustine, in the days when the great Roman libraries were still in existence. It was on the model of the old classical libraries that those of the churches and convents were framed. Of the two kinds of private libraries among the Romans—the simple and the luxurious, which were both described—the simpler plan was adopted by the churches and convents as more fitly serving their needs, the books, for the most part, being kept in chests or locked up in presses. As the collections increased, the books were divided into two classes: one being kept as a reference library, and placed in presses in the cloister where students could come and consult them, and the other consisting of volumes which were lent out to the monks to read. In this connexion the lecturer quoted a curious rule made by Archbishop Lanfranc in 1080 for the English Benedictines. As collections increased, accommodation had to be found for them. At Christ Church, Canterbury, in the fourteenth century, the books, which had increased to 698, were dispersed in cases throughout the convent wherever space could be found. The inconvenience of this to students requiring to refer from volume to volume led to the provision of a room devoted to books, and with conveniences for studying them. Between 1414 and 1443 a library was built over the Prior's Chapel at Canterbury, and another at Durham over the old sacristy; in the Abbeys of Citeaux and Clairvaux similar provision was made over the scriptorium between 1480 and 1503; at Saint-Victor at Paris, between 1501 and 1508; and at Saint-Germain-des-Prés, about 1513, over the south cloister. Buildings specially to hold their libraries were first erected by the universities and colleges. The oldest structure of the kind in England, perhaps in Europe, is the old Library of the University of Oxford, which still retains many features of its original form. This structure, rarely seen by visitors, and even unknown to the majority of Oxford men, is a two-storied building situate on the north side of the choir of St. Mary's Church, adjoining the tower at one end, and separated from the body of the church by a narrow courtyard. Having glanced at the way books were kept, used, and lent at Oxford prior to the erection of this building, the lecturer gave a sketch of its foundation by Cobham, Bishop of Worcester, about 1320, and some incidents in its early history, following with a description of the interior, furniture, and general arrangements. Long desks were placed at regular intervals at right angles to the walls on which the volumes lay on their sides. A bench was fixed in front for the reader, and a window came between each pair of desks to light that pew or cell. Every volume had a metal clip riveted to the front edge of the board forming one cover, to which was attached a light iron chain of the requisite length, having at the other end a ring. This ring ran upon an iron rod, which was carried along the top of the desk, and was secured at the end by a hasp and padlock to prevent the ring being drawn off. The foundation of Bishop Cobham's library was succeeded shortly afterwards by that of the Library of Durham College, Oxford, by Richard de Bury, Bishop of Durham (1335-45), of whom an interesting sketch was given by the lecturer, supplemented by some humorous passages quoted from the bishop's *Philobiblon*. The books bequeathed by De Bury to the college were kept for many years in chests under the custody of scholars deputed for the purpose. At the beginning of the fifteenth century a library was built, and regularly furnished with bookcases or settles enclosing pews or studies between them, where the books were chained. When Durham College came to an end at the Dissolution, its old buildings were utilised by its successor, the present Trinity, and the old library of Durham College still serves as the library of Trinity College. William of Wykeham's New College at Oxford set the fashion for all future collegiate buildings at either University in provision being made for every department, and thenceforward every college had its library as an essential part of its plan. Though books were few, the rooms devoted to them had to be very large, the chaining of the books to the desks making it possible to have only very few on each desk. Soon, as books increased, shelves were formed behind the desks, tier by tier, until at last in the seventeenth or eighteenth century they reached the ceiling. The appearance of the fittings before that time can be well seen in the old library of Merton College, of which a description was given in the paper. Of chained libraries, which the lecturer treated at some length, there are at least three extant in England, that belonging to Hereford Cathedral being the most ancient and perfect. Old chains, hasps, and staples belonging to Hereford—specimens of the actual fittings of a mediæval chained library—were exhibited by Mr. Jackson, and the method of fixing explained. All Saints' Church, Hereford, and Wimborne Minster also possess chained libraries. But the finest in the world is that of San Lorenzo, Florence, the great hal.

of which was designed by Michelangelo in 1524 to contain the collection formed by several generations of the Medici. The lecturer then touched on the difficulties of consulting books in the old chained libraries. Shelves for the ever-increasing number of books had been provided, but desk accommodation remained as before. One student occupied on a volume prevented three or four others getting access to the book. This led to the library rooms being enlarged. Interesting reference was made by the lecturer to Duke Humphrey's connexion with Oxfo d, and to his splendid benefaction of 600 books to its library in the earlier half of the fifteenth century. The new acquisitions made more commodious quarters imperative, and in 1444 the University resolved to build an upper story to the new Divinity School, which, begun in 1426, was being slowly carried towards completion. The change was at length made in 1480, when the University library was removed from the old solar or upper chamber at St. Mary's to the new solar over the Divinity School. The lecturer then glanced at the subsequent fortunes of the Library, which was despoiled of the most valued of its treasures by the Commissioners of Edward VI., and munificently enriched, altered, and enlarged by its second founder, Sir Thomas Bodley, at the end of the sixteenth century, since whose day the venerable central room has remained practically unaltered, the most attractive spot to the student to be found anywhere. Chains were bought for the Bodleian Library as late as 1751; and it was not till 1757 that this method of securing the books was abolished. Other libraries described, more or less, were that of St. John's College, Cambridge; the new library finished by Sir Christopher Wren in 1695, which forms the western side of Nevill's Court at Trinity College, Cambridge—a stately building, both within and without, a triumph of architecture, which would suffice by itself to establish Wren's reputation as an artist; and the fine building of the Radcliffe Library, completed by James Gibbs in 1747. Interior and exterior views and details of the various buildings described were shown by the lantern, including a view of a library of the lecturer's own making, in which he had tried to combine the two arrangements of cases against the walls and cases breaking out from them.

In the discussion which followed,

Mr. Willis Clark remarked that it had given him great pleasure to hear Mr. Jackson's most instructive lecture. He would like to add a few words about libraries of religious houses. He thought it was to them, especially to the Benedictines, that we owe our modern libraries. With regard to the libraries of the religious orders, St. Benedict little realised how far his rules would be obeyed, and the amount of volumes his votaries would collect; and consequently a library did not form part of the original Benedictine plan. At such monasteries, when the books became too numerous, a library had to be arranged for wherever a place could be found. At Durham, it was over the sacristy next the south transept. At the great Cistercian houses at Citeaux and Clairvaux, it was in an independent position over the scriptorium. These libraries were, as Mr. Jackson had told them, all long, narrow rooms, with windows equally placed; and from the catalogues of some, especially that of Citeaux, it could be made out to a certain extent what the bookcases were like, and he thought that they exactly resembled those in the library of Merton. Of course, they possessed desks, and the volumes were chained, and therefore they must have had seats in front of them, and it was distinctly mentioned that they had two shelves. He had not been able to discover any mediæval monastic book-desk. He hoped there were some present who would find such. It was almost impossible to imagine that there were none somewhere. From a study of monastic customs, it would be seen how great was the care taken of manuscripts; but the monks had never any objection to lending their MSS. under proper precautions; and no doubt the preservation of French libraries during the Revolution was due to the belief the people had in their value and use to the neighbourhood. They could find, with tolerable exactness, how monastic libraries were fitted up by reference to those at Oxford and Cambridge. Oxford was better off than Cambridge in that respect, because Oxford was richer than Cambridge, and the bookcases were better designed and were taken better care of. Although the Universities were founded to counteract the monastic system, it was most unlikely that the one system would not borrow from the other, as the library-statutes of the colleges were unquestionably copied from those of the monasteries. Then the question arose, "How was the modern bookcase evolved from that of the Middle Ages?" The lecturer told them that it was to the genius of Wren that they owed the modern system. The first library he fitted was not Trinity College, but that by Dean Honywood at Lincoln, where the bookcases were set against the walls instead of being at right angles to the walls. Where did Wren get his idea from? He put it forward with great diffidence that he got it from Paris—at the Mazarin Library. Mazarin got the idea from the Escurial, which was fitted up in 1585, and was, as far as he knew, the first library in Europe where the bookcases were placed against the walls. He believed the idea was copied by Wren, who studied at Paris, and it was reproduced by him at Lincoln and at Cambridge. At Lincoln the older library was fitted up with great desks, which were a splendid specimen of carpentry. There was also a curious one at Wells; it was certainly built in the fifteenth century, but fitted up by Dean Bathurst after the Restoration with appliances for chaining. But chains were never used there, and this was a striking instance of the survival of forms in furniture.

Mr. H. W. Brewer said that Mr. Jackson had almost exhausted the subject. Yet might he be permitted to call attention to the will of the illustrious John Carpenter, the founder of the City of London School, who bequeathed the bulk of his library to the Guildhall, and stipulated that the books should be chained. The reasons he gave was that they should be available to the poor scholars in the City of London, who might at any time wish to consult them. The library of John Carpenter seems to have been an interesting collection. One book of special interest to the Institute was bequeathed to a relation, afterwards Bishop of Worcester. It is described as "that book on architecture, given to me by William Cleve," who was Controller or Master of the Works to Henry V. or VI.; he added a building to the Palace of Westminster, and built that fine hall at Eltham, besides executing works at the Tower of London. Another book of special interest was called "De Remidiis Utriusque Fortunæ." In this work he spoke of how to remedy having too much money or too little money. These works were of interest to architects and other people, and he should be very glad if they found their way into the library of the Institute.

Mr. H. H. Statham wished to propose a vote of thanks to Mr. Jackson for one of the most interesting papers they had heard in that room for some time. The interesting point to architects was that he had traced out so well the influence of the practical requirements of libraries on the architectural treatment of the buildings, and shown how such an arrangement as that by Hawksmoor in one of the illustrations had been evolved by degrees from the mere arrangement of a table for books and a convenient light for seeing them. The production of some of the actual chains and bars from the old libraries, with the explanation of the manner in which they were manipulated, gave a vivid realism to the account, and almost seemed to bring them face to face with the people who studied those chained books. One could imagine the interest with which books must have been regarded at the revival of learning, when they were few in number and were the opening of a new world of idea; as Chaucer said of his clerk,*

> "Him had lever han at his beddes hed
> A twenty bokés, clothed in black or red,
> Of Aristotle and his philosophie,
> Than robés riche, or fidel, or sautrie."†

The phrase "clothed in black or red" gave a hint as to the favourite colours for binding ordinary books in Chaucer's time. As to bindings, he was in favour of good binding for good books. Many ordinary bindings of the present day were exceedingly flimsy. In a little book by Mr. Henry Stevens of Vermont, "Who spoils our new English Books?" a criticism on the bad get-up of modern books, the flyleaf was tagged with appropriate quotations; one of these was the following sentence from the Bible—"Whom Satan hath bound." As to some other points in regard to books, human nature did not alter much. They did not chain books now; but only three days before he had seen posted in the hall of a well-known London club, much frequented by literary men, the following notice: "The copy of —— has been missing from the reading-room for a fortnight. The member who took it away in mistake for his umbrella is invited to return it."

Professor Baldwin Brown, in seconding the vote of thanks, observed that it was quite in accordance with the traditions of the Institute that they should have one so closely associated with art and modern architecture to carry them back to the freshness afforded by a glance into the past. As to monastic libraries he believed there was an earlier one than had been mentioned by the lecturer. It was the famous library at St. Gall, in Switzerland, which dated from the tenth century.

Mr. E. W. Hudson said there was one library in which they must all feel great interest—that founded at Paris by St. Louis, who got his idea from the East. It was a pioneer public library in Christendom, and as the design of Pierre de Montereau was of considerable interest to architects.

Mr. St. John Hope, also speaking of monastic libraries, thought he might suggest in the presence of architects and architectural students that if closer attention were paid to the examination of monastic ruins, many indications would be found of the existence of these libraries. For instance, the cloisters of places like Worcester, Kirkstall, and Furness revealed recesses in the walls which, unquestionably, were used for the safe-keeping of books.

The vote of thanks having been adopted,

Mr. Jackson briefly replied to some of the observations that had been offered. An architect himself, he was, he said, jealous of the reputation of Wren, and he could not assent that he borrowed the idea embodied in the Trinity College Library.

The Chairman announced that the next meeting will be held on Monday, June 6, to receive the Report of the Scrutineers appointed to direct the election of the Council and Standing Committees, 1898-99, and to discuss the Revised Paper on the Professional Practice as to the Charges of Architects.

The proceedings then terminated.

* Prologue to Canterbury Tales.
† Psaltery.

## ELECTRIC LIGHTING AS APPLIED TO ARCHITECTURE.*

IN addressing the members of this Association this evening on the subject of "Electric Lighting as Applied to Architecture," an explanation is, I think, due to them why I, an engineer, should venture to speak to you on a subject which professionally you are generally and rightly supposed to know far more about than engineers do. When your President-elect, Mr. George Fellowes-Prynne, suggested my reading a paper before you on this subject, I demurred on the grounds that, so far as the artistic and decorative portion of the subject was concerned, I was rather in the position of one seeking for information than one who is able to impart it; but he was good enough to assure me that the subject was of such importance to architects, and could be examined and discussed from so many points of view, that I assented, on the understanding that I might be allowed to treat the matter from an engineering point of view, and in the manner I thought most likely to impart information and provide points for discussion.

Now I assume that in this year of grace it is unnecessary for me to take up your time by dwelling upon the manifold and very apparent advantage of electric lighting over every other known form of illuminant, whether it be considered from an hygienic, artistic, decorative, or even commercial point of view, and it is generally admitted there are very few individuals—excepting, of course, those interested in gas or oil companies—who will not honestly endorse this statement. At the commencement of this paper, then, it will be as well to state that I do not propose to touch upon or refer to the subject of electric lighting outside buildings; that is, upon the generating plant or other sources from whence electric energy is brought into the building or group of buildings, but rather to confine my remarks to internal lighting and the manner in which the current should be conveyed to the various points of light.

* A paper by Mr. Tom Ekin, read at the meeting of the Architectural Association on the 6th inst.

Dealing firstly with the distribution of lights, it is obvious that the lighting of different classes of buildings requires distinctive treatment, because the lighting of a cathedral cannot be compared with that of a railway station, any more than the lighting of a ball-room or drawing-room can be compared with that of a bed-room or kitchen. Each room or space which it is intended to light should be considered and examined from at least three different points of view, namely :

(1) The purpose for which it is to be used.

(2) The decorations, furniture, and general surroundings, and

(3) The cost of the proposed lighting.

Which of these three points is the most important is probably a matter of opinion, but it may safely be assumed that the third point, or question of cost, is not the least important, because it may be taken as granted that the skill of the architect or engineer in arranging a system of lighting is in no case more marked or apparent than in getting the maximum lighting effect at minimum cost, this minimum cost including not only the first cost of putting in the work, but the more important one of annual expenditure and renewals.

When considering the question of lighting new buildings by electricity, the subject can be treated and dealt with with a far freer hand and, generally speaking, with far greater effect than in the case of houses at present lighted by gas or other form of illuminant, because one is so very apt to take the positions at present held or assigned to gas as those most suitable for electric lamps, quite forgetting the fact that gas is so non-adaptable and lends itself with such ill grace to artistic effect that there are only certain positions in any room in which it can safely be placed. Now I shall assume as an axiom, that the most perfect form of lighting is that evolved from a hidden system of lamps, in other words where no portion of the lamps themselves are brought in direct contact with the retina of the eye. It is, however, only right to point out that this form of lighting, like many other nice things in this world, is, generally speaking, the most expensive, because, as a rule, it means the placing of the lamp or lamps under some form of shade, whereby a large portion of the illuminating power is lost, and, therefore, and in order to get the same effect or amount of light from hidden lamps as from ordinary unshaded, or only partly shaded lamps, double or even treble the amount of energy has to be used. In public halls, concert rooms, churches, &c., the points of light can, if taken from the ceiling or roof, be raised sufficiently far above the heads of the audience that, unless they wantonly gaze at the lamps, no inconvenience to the eyes need necessarily be felt, but it is different in the case of ordinary rooms, be they drawing-rooms, boudoirs, or dining-rooms ; and it is these classes of rooms which, in my opinion, require the most careful thought as to the disposition and arranging of the lamps.

In dealing with this matter, it is, perhaps, unnecessary to say that I am dealing solely and wholly with the incandescent electric lamp, and that I do not propose to touch upon the question of arc lighting this evening, because, though this light is pre-eminently suited for streets, railway stations, and other similar places, it is not, and, I believe, never will be, suitable in any way for the internal lighting of buildings. Many of you here this evening must, at some time or other, have been struck with what is generally termed the "glare" of the electric light, and may possibly have thought that this was one of the inherent faults of the system. I need hardly say it is nothing of the sort, and the fault lies, not in the system, but in the brain of the stupid person who put it there. No sane man or woman, with any regard to their eyes, wilfully stares at the noonday sun; but I submit it is just as idiotic to put up a clear electric lamp and gaze at it as it is to gaze at the sun. Electricity, like most other things, to be properly appreciated must be suitably adapted to the end in view, which, as before stated, is a diffusion of soft light, without the lamp from which the light emanates being brought in direct contact with the eye. I am fully aware that the cost of complying with this requirement is in many cases too heavy to allow of its being adopted, but I submit there is no reason why every electric lamp should not in some form or other be shaded, even if the shading is simply the putting in of an "obscured" lamp in the place of a clear one. It is evident, or at any rate should be evident, that the lighting of each particular room or space should be separately considered, and that being so, it is impossible to lay down any hard-and-fast rules as to what is necessary in each particular case; and it requires a certain, or I may go even so far as to say a good deal of practical experience and judgment to know the proper amount of light required, and also the position in which the lamps should be placed. Under these circumstances, therefore, I fear it is quite impossible for me to lay down any rules which would be of the slightest value in enabling you to properly arrange for the lighting of any building in which you are interested. There are, as you are doubtless aware, certain "rule-of-thumb" rules which are given in pocket books and similar literature, but I have never found them to be of the slightest value ; but, on the other hand, rather misleading. Take, for instance, a drawing-room. What use is it to anyone to know that a 16-candle power lamp will light a certain number of square feet of floor when raised a given height above it? In my opinion none, for the simple reason that it is quite impossible to take into calculation or make due allowance for the surrounding colouring of either walls or furniture.

Leaving artistic effect out of the question for the moment, it is evident nothing is easier than to drop a number of pendants from the ceiling, and if these are kept a certain distance from the floor, you can procure the maximum amount of light with the minimum number of lamps and cost. This mode of lighting is, however, not to be recommended ; indeed, it is strongly to be deprecated, and when one sees a room lighted in the above manner it is at once apparent that a Goth, Vandal, or other barbarian, has had the arranging of the lights. I think it will be generally conceded that the most pleasant, and at the same time, most artistic method of lighting ordinary living rooms is by means of wall brackets, standard lamps and table lamps, the lamp in each case being shaded so as not to come in direct contact with the eye. With regard to the other rooms in a house, there is not, as a rule, much difficulty in assigning the right position for the lamps and their numbers, but at the risk of reiteration I would again impress upon you the desirability of considering the lighting of each room, or at any rate, of each principal room separately and from the three points of view mentioned at the beginning of this paper.

Now the next portion of my paper has to deal with the manner in which the electric current is brought from the place where it enters the building to the lamps themselves, in other words that portion of the work generally spoken of under the comprehensive term of "wiring." As you are doubtless aware, this word "wiring" includes not only the supplying and laying of the various wires and cables, but also—at least as a general rule—the switch and fuseboards and subsidiary switches, and occasionally the necessary "cutting away and making good," this latter expression being in many cases incorrect, as you, like myself, have probably found by experience that it could be more accurately described as "hacking and tearing away, and not making good." Many of you have doubtless had before you the tenders of some electric lighting contractors for the lighting or wiring of certain buildings, and perhaps have even gone so far as to draw up a common specification to which these various firms have tendered, and you have doubtless been surprised to find that the highest tender is sometimes half as much, and in some instances, as much again as the lowest, and furthermore have been puzzled to know what should be done under the circumstances. Of course, if no specification has been issued, the reason of the difference in prices is easily explicable, inasmuch as the contractors having no common basis upon which to draw up their tenders, simply send in an estimate for the work and material they consider necessary, with the result that if the contractor is an honest man, taking proper pride in his work and with a reputation and good name to lose, his prices must be, and always are considerably higher than those of an individual whose commercial instincts have unfortunately prevailed and got the better of his moral ones. It is far otherwise, however, if the contractors have tendered to a common specification, because if there are great discrepancies in the tender, it is evident either that the individual quoting the lowest figure is willing to forego all profit, or else that the one quoting the highest figure intends to make a fortune. Neither of these hypotheses are probable or ever likely to occur in practise, and it will generally be found that the real cause of the differences may be found in the loose and unscientific manner in which the specification has been drawn up. For a skilful and perhaps unscrupulous contractor nothing is easier than to drive a coach and four through a loosely and inaccurately drawn up specification, whilst it is evident that even an honest contractor—being but human—will avail himself of every opportunity in interpreting an ill-drawn clause to his own advantage. Perhaps I may be considered wanting in courtesy in suggesting that you are likely to draw up a faulty specification, but I can assure you nothing is further from my thoughts, and my only object in speaking thus plainly, is to insist upon the absolute necessity of drawing up the specification in the most careful manner and with a full knowledge of all the requirements necessary and incidental to the proper carrying out of the work. My experience has been that many points of vital importance to the work are—probably from want of technical knowledge—entirely omitted from many specifications, and others of no technical importance are treated with a fulness and amplification entirely unnecessary. What is the use of carefully specifying the density of current allowed per square inch of sectional area in the copper conductor, when the loss of pressure, or to use a more technical phrase, the fall in voltage, or electro motive force, is omitted? None whatever, because in the case of a light, or group of lights, placed at some distance away from the source of supply, or point from whence the electric energy is brought into the house, the contractor might possibly be carrying out his work strictly in accordance with the specification, and yet the lamp or lamps would look like "hot hairpins," owing to the fact that the very essential point of loss of pressure had not been taken into account. Again, what is the use of specifying the most heavily insulated wire and omitting the final test when the work is completed? Instances like these could be given *ad libitum*, but for the purpose of argument this is unnecessary.

There are still two points upon which I should like to give a warning, and these are, firstly, the low-priced contractor who looks to make his legitimate (or, as some would say, his illegitimate) profit on fittings ; and, secondly, the contractor who offers to put in the work so that it will comply with the ridiculously low requirements—I refer to the test of the insulation resistances—of the fire offices. In London and other towns where there are electric supply companies, this latter danger is to a large extent rectified and guarded against by the fact that all work has to pass the more reasonable standard of the supply company, but it still remains in the cases of country houses, and houses in towns where the owner or occupier generates his own electric energy.

This paper, I fear, may seem to many to contain little or no information, but its title precludes any technicalities, and, therefore, I have confined myself to general statements which, even if not useful, may, at any rate, fulfil the desired object of raising and providing points for a discussion.

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Mr. G. H. Fellowes-Prynne, in proposing a vote of thanks, said that in his opinion it was absolutely necessary for the architect of a building to call in an electrical engineer where electric lighting work had to be done. He said this with considerable experience of electric lighting, and he felt his own inefficiency when work of this kind had to be executed. The architectural effect, however, should be left to the architect. As to specifications, what the lecturer had said was perfectly true, for he, the speaker, had seen specifications of electric lighting work which had been written by architects, which showed great ignorance of the subject. If architects thought that they could, in addition to all their other works, take up that of electric lighting, *i.e.*, the technical, he thought they were overrating their powers. As to the question of hiding electric lights in public buildings, as the lecturer had said, it was satisfactory to keep the lights fairly above the heads of the people, and so not bring them into direct contact with the eye. In that room they had an illustration of placing the lights above their heads with the most glaring and unsatisfactory result; the lights looked like red-hot hairpins, and they fixed themselves on the retina of the eye. Their idea must not be to get the maximum amount of light ; it should be powerful light subdued, though that might be very well sometimes. As to brackets and shaded lamps they looked very nice in drawing-rooms,

&c., but he did not think they were always satisfactory. He did not like brackets. If they could hide the lights in the ceiling, or at some given points, he thought that most satisfactory results could be obtained. Patches of light were to be avoided, such as were often to be seen in drawing-rooms, for they distorted the architectural proportions of a room. They must apply electric lights to each particular room as the lecturer had said.

Mr. Sim seconded the vote of thanks, and said that, in regard to obscuring light, no one ever thought it strange to put a shade over gas or a lamp, but when a shade was used over an electric light it was frequently said that energy was being wasted.

Mr. A. S. Flower said that there was no time to add anything to the discussion, but he felt that if the author of the paper had been present that evening he would have been shocked at the manner in which that room was lighted.

The Chairman said it was always interesting to hear what an engineer had to say on architectural matters, but he would like to have the subject well handled by an architect. He would like an architect of experience to give them his ideas on the best way of utilising the electric light; how to wire a building without spoiling the architecture, which some electrical engineers did not seem to consider at all. From what Mr. Prynne had said, he, the Chairman, supposed that he was in favour of hiding electric lights, but a word might be put in, if not for brackets, then for what Mr. Hare and Mr. Mountford had done in some of their buildings, where they had used dropped pendants and had secured some charming effects. Some such method might be utilised, he thought, for electric lighting instead of gas forms of chandeliers, as was often done.

Mr. Prynne said he should like to add that he felt that the engineers ought to be called in to bring in the motive power, &c., and that architects should have the absolute control of the fittings and their positions.

The Chairman, in putting the vote of thanks to the meeting, proposed that their thanks be accorded to Mr. Carvill for reading Mr. Ekin's paper, in the author's unavoidable absence. This having been agreed to,

The Chairman announced that the next meeting would be held on the 20th inst., when Mr. A. T. Walmisley would read a paper on "Riverside Foundations," and at the same meeting the result of the election of officers would be announced, and the award of the A.A. Travelling Studentship would be made.

The meeting then terminated.

## MAGAZINES AND REVIEWS.

THE current quarterly number of the Berlin *Zeitschrift für Bauwesen* contains matter of very varied interest. An article on the handsome new Government offices at Osnabrück, which were finished in 1896, occupies the front place, and is illustrated by two half-tone blocks in the text, and by reproductions of the plans and elevations in the accompanying atlas of plates. The second paper appeals to the antiquary; it is an illustrated account of the striking front of the Rathhaus in Boeholt, erected in 1619; there is a measured drawing of this in the atlas. Prof. Konradin Walther's Art School at Nüremberg is next described and thoroughly illustrated; after which we have an almost too short account of the very interesting early thirteenth-century Sexton's house at St. Florin's Church, Coblenz. A paper which follows on a new iron bridge, bristling with mathematical formulæ and abstruse diagrams, is a startling change from the quiet old-world Romanesque of the Coblenz building. An exhaustive paper on the Kaiser Wilhelm Canal follows, illustrated by elaborate double-page diagrams in the atlas. There are other articles besides those we have mentioned; but we need say no more in commendation of this very handsome and valuable periodical.

The *Architectural Record* contains an article on the Mairies of Paris, by Mr. F. Mazade, a subject of considerable interest, elucidated with a good many illustrations of these buildings, which are among the best productions of modern French architecture. Mr. Russell Sturgis writes on "The Art of William Morris" from the present standpoint, which will be modified sooner or later, though people do not like to be told so now. A large portion of the number is taken up by an account, with illustrations, of the work of the American architect, Mr. F. H. Kimball.

The *Architectural Review* (Boston) publishes as its illustrations working and detail drawings of the Court House and Post-office at Paterson, by Mr. Taylor, the Supervising Architect of the Treasury, which are of more interest than official architecture in this country generally is; and illustrations and plans of a building of similar class at Camden, by Messrs. Rankin & Kellogg; this latter is an orthodox classic structure, with a very refined detail perspective of the columned porch, but certainly little originality of treatment anywhere. Mr. Clipston Sturgis contributes a well-judged article on the pleasing subject of "The Garden as an Adjunct to Architecture."

Among the contents of the *Art Journal* is an article on "Mirrors and Frames" by Mr. E. Guy Dawber, with illustrations of various rather typical ancient examples. Among deceased painters G. Barrett, and among modern ones Mr. G. Brough, are the subjects of articles, and the series of "The Royal Academy in the Present Century" deals with Smirke and Westmacott.

Among the contents of the *Studio* (April) are articles on the work of Mr. Heywood Sumner and on M. Harpignies, with reproductions of some of the original landscape sketches of the latter. The May number contains an article in memory of that clever but wrong-headed and much over-rated artist the late Mr. Aubrey Beardsley, and some sketches and a description of Mr. Harrison Townsend's curious and picturesque house "Cliff Towers," designed we should say under American influence, but none the worse for that.

The *Magazine of Art* also has its article on Aubrey Beardsley, by Mr. Aymer Vallance, and much more enthusiastic than we can go with. A subject of more interest is the work of M. Roty, the great French medallist, with a number of illustrations of the medals modelled by him.

The *Gazette des Beaux Arts* includes the second and concluding portion of an article by M. Emile Bertaux, on "Le Tombeau d'une Reine de France" at the cathedral of Cosenza, in Calabria, a monument executed by French hands in memory of Isabella, queen of Philip the Bold. There are some interesting details as to the style of the cathedral, which contains, it is said, singular archaisms of manner, along with details which, occurring in France, would be attributed to the thirteenth century. Other articles are one on the atelier of M. Rodin, the sculptor, with a good many of his own sketches, and one on various portraits of Marie-Antoinette.

The *Artist* gives what is called a Royal Academy number, though it deals with other exhibitions as well, but the number of reproductions of sketches and studies for pictures in the Royal Academy gives a special interest to the number.

The *Engineering Review* includes articles on Architectural Steel Construction, on the Purification of River Water, and on "Finding and keeping Shop Costs." As this appears to be a description of some American systems, it may be of interest to English employers to see if they can gain any suggestions of value from it.

Under the title "The Understanding of Architecture," the *Edinburgh Review* devotes an article to the review of several recent books on architecture, viz., Mr. Blomfield's "Renaissance Architecture in England," Mr. Hamlin's "Text Book of the History of Architecture," Mr. Anderson's "Architecture of the Renaissance in Italy," and Mr. Statham's "Architecture for General Readers" and "Modern Architecture." As the title implies, the article treats of architecture mainly from the point of view of education of public taste and knowledge in regard to the subject. The following quotation from the conclusion of the article will give an idea of the position taken by the author:—

"There are many arts and sciences upon which people hesitate to give opinions without previous study, even though the raw material of the art or science be a matter of everyday observation. In spite, for instance, of our familiarity with the heavenly bodies, it is uncommon to hear astronomical theories discussed in the club smoking-room, nor, in spite of our still greater familiarity with our own human frames, are we wont to argue physiology with the doctor. But architecture, says the man in the street, is another matter, and unless he shrinks from considering the art at all, he leaps to judgment unprepared, or perhaps criticises, on the strength of a month's cram, the art in which a true learner takes ten years to discover his own ignorance. Many men will pass judgment on a building whose criticism is of no more value than the opinion of a nursery governess on a doubtful passage in Pindar, yet so apparently transparent are the secrets of the art that you will never persuade them of their incapacity.

Architecture is very like language, and style in architecture is very like style in prose, yet there is many a self-constituted arbiter of propriety in building who has not yet gone so far in the study of his subject as to discern among the elements of the work he attempts to analyse what is inspiration, what is composition, what is grammar, and what is merely orthography.

Let him read the books which head this article, and he will be in a fair way to grasp not the whole knowledge of the art, but some of the issues with which he has to deal."

The *Quarterly Review* contains a weighty article on "Trade Unions in Practice and Theory," of course prompted partly by recent events, but taking the shape of a review of Mr. and Mrs. Webb's "Industrial Democracy." The *Review* "recognises in the Trade Union movement a passionate rebellion, with the inner meaning of which we heartily sympathise. The same intrepid spirit, which has prompted so many fruitless sallies against the windmill of capitalism, will, we hope, some day be directed to a more hopeful enterprise." An article on "Prehistoric Arts and Crafts," in a part of which the author attempts to realise, from prehistoric remains, the process of evolution of various implements, some of which are not essentially different in their modern forms, is of more than average interest.

The *Nineteenth Century* contains an article of considerable interest by the late M. Yriarte, on "Personal Recollections of Meissonier." It gives, among other interesting facts, a good many examples of the extraordinary pains which Meissonier took to arrive at complete realism in the detail of his pictures. In his house in Paris he constructed in various corners models of buildings, &c., intended to serve as backgrounds, and which he drew from different points of view for different pictures. He established a ride in his garden with a little tramway parallel to it, where a horseman would be made to ride a horse at different paces, while the artist was pushed along a waggonette on the tramway parallel to the animal, so that he could keep an eye on its every action. With the same object he used to take long rides with his son Charles, the two keeping abreast of each other at a sufficient distance apart for the painter to be able to observe the action of his son's animal. For the groundwork of the picture "1807," where the cavalry charge passes over a cornfield, Meissonier actually purchased a whole field of standing corn, and persuaded the colonel of a dragoon regiment to lend him a troop of men to gallop over the field so as to see the effect. Such were the studies on which the fame of the greatest realistic painter of the age was built up.

*Scribner*, under the heading of "The Field of Art," prints an interesting little discussion between two writers, "K. C." and "R. S.," on "The Lesson of the Photograph." R. S., whom we take to be Mr. Russell Sturgis, makes some good remarks in regard to the comparison of photographs of nude models with actual artist's work, showing how completely the nude figure in art is a conventional thing.

The *Century* includes an article on "An Outline of Japanese Art" by Mr. E. F. Fenollosa, "with unique and unpublished examples;" some of these are very curious and interesting. In the same number is "Railway Crossings in America;" No. 2 of the "Seven Wonders of the World," being the Pyramids, about which (as may be supposed) no new information is given; and a useful article by Professor Trowbridge, entitled "What are the X-Rays?"

*Harper* contains an article summing up the history of "The Trans-Isthmian Canal Problem."

The *Revue Générale*, in its illustrated article, deals this month with the subject of "Rembrandt at Cassel," treated by M. Geo. Verlaut, with eight illustrations from Rembrandt's works. It may interest our readers to learn that the subject of the new legislation in England in regard to compensation for accidents to workmen is fully treated in an article by M. Léon Rigo, who gives a good ontline of the whole position of the subject in England, and sums up in favour of the recent law. The subject of English enactments on this head is evidently regarded with interest in France.

The *Pall Mall Magazine* for June (already out—we shall not know which month is which presently) contains another instalment of Sir Walter Besant's London articles, on "South London." These are interesting reading, but we are rather sceptical as to their historical value; they savour somewhat of book-making. "The

Evolution of Comfort in Railway Travelling," continued from the last number, is a subject of practical interest to most of us.

Among the contents of the *Antiquary* are "Old Sussex Farmhouses and their Furniture," by Mr. J. Lewis André, and "French Glass Makers in England in 1567," by Mr. E. Wyndham Hulme.

The *Essex Review* (quarterly) gives an account of "Recent Additions to Essex Belfries."

We have received several illustrated publications in connexion with the annual exhibitions; the *Studio* "Record of the art of 1898" and a special "Paris Salons" number (which latter, however, seems only to have secured the minor works and not the great ones) two numbers of "Royal Academy Pictures" (issued by the *Magazine of Art*), and the *Art Journal's* "Pictures of 1898," on a rather smaller scale. As to general execution of the illustrations there seems little to choose between the various publications.

We have also received *Knowledge*, the *Gentleman's Magazine*, and two issues of the *Genealogical Magazine*.

## THE LONDON BUILDING ACT:

### TRIBUNAL OF APPEAL CASE.

AT the Tribunal of Appeal offices, on Monday, Mr. H. Gundry, of Paddington, appealed, under the London Building Act, 1894, on behalf of Mr. Henry Ward, against the disapproval of, and the refusal of the London County Council to sanction (under Section 42 of the Act) the plans, dated March 15, 1898, of a building not abutting upon a street, and adapted to be inhabited by persons of the working class, such building being shown to have stabling on the ground floor at the rear of 417, 419, and 421, Edgware-road, and an entrance through the ground floor of No. 118, Hall-place, under the provision of Section 42 (5) of the Act. The members of the Tribunal sitting were Messrs. A. Cates (Chairman), J. W. Penfold, and A. A. Hudson. Mr. McMarran, Q.C, and Mr. Alexander Glen represented the appellants, and Mr. Seager Berry the London County Council.

Mr. Glen, in opening the appellant's case, said it raised simply a question of the construction to be placed upon certain clauses of the Act. The building in question did not abut upon a street, being, in fact, between Edgware-road and a road called Hall-place, but there was access to both roads. The building consisted on the ground floor of a repository for horses. Above that were some flats, each tenement consisting of four rooms intended to be let from 10s. to 16s. per week. That rental, it was true, was rather above the usual rental paid by the working classes, but still the claim that the building was to be inhabited by the working classes was not in dispute. It was at Sub-Section 2 of Section 42 that the question of difference began to arise. It provided that in any case where the County Council were satisfied that there would not be provided above such building sufficient open space for the admission of light and air it should be lawful for such Council to refuse sanction to build. If the appeal were based upon the suggested wrong exercise of that discretion, then it would be for the Tribunal to say whether there was sufficient open space or not. But, as a matter of fact, that question did not arise in the present case. They then came to Sub-Section 2 of Section 41, which prevented the Council refusing their sanction in a case where the builder had complied with the provisions relating to dwelling-houses abutting on a street formed or laid out before the commencement of this Act. The question which the Tribunal would have to determine was, whether in the proposed building his clients had complied with the provision relating to dwelling-houses abutting upon an old street. That provision read: "With respect to domestic buildings erected after the commencement of this Act abutting upon a street formed or laid out before the commencement of this Act the provisions of this section shall apply, with this modification that the horizontal line shall be drawn throughout at a level of 16 ft. above the level of the adjoining pavement." In dealing with the plans in question, Mr. Glen said it was admitted that the horizontal line would be such as demanded by that section. Further, Sub-Section 1 made it necessary that there should be provided in the rear of every such building an open space exclusively belonging to such building of not less than 150 sq. ft. He did not think there was any question arising as to that matter, as that amount of open space had been provided for. Again, the second section of Sub-Section 1 stated that where there was no basement story, but where the ground story was not constructed or adapted to be inhabited (as in the present instance), then the open space required might be provided above the level of the ceiling of the ground story, or at a level of 16 ft. (exclusive of lantern-light), measured from the level of the adjoining pavement. It was not disputed that his clients had complied with that. This being the case, he failed to see what grounds the Council had for refusing sanction to the building, and he asked the Tribunal to sustain the appeal.

Mr. H. Gundry, Paddington, the architect for the building in question, then gave evidence, in the course of which he contended that all the conditions of the proviso of the Act had been complied with. In cross-examination, he stated that the building of the stables had been commenced without consent having been received from the Council.

Mr. Seager Berry, in stating the case for the Council, said, as usual, they seemed to be embarking on a question of law. But he submitted that no real substantial question of law need arise. In reading Section 42, he submitted the position was this: An applicant came to the Council and asked for sanction to erect a working-class dwelling, which did not abut upon a street. The whole proceedings went on the assumption that nothing had up to that time been done. They had got to gather what was going to be done from the documents and plans. The appellant had all along treated the building in question as one building, inclusive of the horse repository, and he asked the Tribunal to hold that it was unreasonable that he should come there that day, and suggest that it might be two.

Mr. Glen said he was quite prepared to treat the building as one building.

Mr. Berry, proceeding, said the appellant was not relying upon any merits of the case. His contention simply seemed to be to this effect: "I am inside the proviso, and the County Council are bound, therefore, to allow my plans." And he seemed also to say in effect that the Tribunal was bound to allow his appeal. But even if he were inside the proviso, the Court was not bound to grant the appeal, because it had been held in the case of Queen *v.* the Council, *ex parte* Webster, that if a person commenced a building which required consent (as had been done in the present case) before that consent was given, the Court was not compelled to uphold the appeal.

The Chairman pointed out that Mr. Gundry had said that the erection of the dwelling-house had not commenced.

Mr. Berry, in reply, said the building of the stable had been commenced, and as the stable was part of the dwelling house, the building of the dwelling house had in fact been commenced. Proceeding next to consider the proviso, Mr. Berry contended that this had not been complied with by the appellant, as the amount of open space provided was not equivalent to the amount which would have been provided in case such building had been commenced before the commencement of this Act, and in case it was abutting upon an old street. "Open space or spaces" must mean the equivalent of 63½ deg., with allowance for street on the one side, and allowance for the street on the other. As a matter of fact the appellant had made no allowance at all in the front for the street.

Mr. Gundry: There is a space there of 40 ft.

Mr. Berry: Yes, but that is counting in the back yard of the next house. You may have allowed 504 ft. more behind than you need have done, but you have 1,040 ft. less in front than you should have. Concluding, Mr. Berry said his contention was that the building was one building, that the whole was a dwelling-house, and that the appellant had, therefore, not complied with the terms of Section 42, inasmuch as he had commenced to erect such dwelling-house before having received consent. Further, he had also not complied with the proviso as to open space.

Mr. Glen, in his reply, contended that his client had not commenced illegally to build. The stable was not the dwelling-house portion of the house.

The Tribunal, after a moment's consideration, said they had come to the conclusion that they must dismiss the appeal, but they would make no order as to costs.

## ADMINISTRATIVE BLOCK, ST. MARYLEBONE WORKHOUSE.

THE Lord Bishop of London opened yesterday (Friday) the new central administrative block of St. Marylebone Workhouse.

In 1896 the erection of the administrative block of buildings was commenced. The front elevation facing Northumberland-street entrance has been so arranged as to be in keeping with adjoining buildings, the centre portion being faced with red brick and Portland stone dressings; the old clock and peal of bells which were taken out of the demolished buildings have been remodelled to suit their new position. Above the clock an octagonal belfry has been formed for the bells, built in English oak, and covered with lead, and terminating with a weather vane. The two wings, with towers at either end, are faced with white Arlesley bricks, red brick band, and Portland stone dressings.

The new building stands upon the site of the original administrative blocks and chapel, which were pulled down in the latter part of the year 1896. It is designed to concentrate in one block the whole of the Administrative offices (except the laundry) of the workhouse, and such parts as are used in common by all the inmates. The two wings contain also special wards, which it is desirable to keep separate from the other blocks. Placed opposite the entrance gates, the main front forms one side of the entrance administrative court. The principal entrance in the centre leads by a short and wide passage to the visiting committee's room, in which the Guardians will meet weekly upon the business of the house, and to interview inmates, for whom two waiting-rooms are provided in place of the original draughty and constricted passage. On either side of the entrance are respectively offices for the master and matron and master's clerks, and medical officer's consulting room. The offices are so placed as to command the whole of the administrative court.

In the rear of the block, and approached by two corridors from the front, is the general dining hall—120 ft. in length by 50 ft. in breadth, and capable of seating over 1,000 inmates at meals. The hall is divided into a nave and two aisles, and is lighted in the daytime by eighteen semi-circular clearstory windows and others in the west aisle. The walls are faced with glazed bricks relieved by a dark dado and coloured bands. The roof is open timber and the panels are decorated in stencilled colour. Adjoining the dining hall is the general kitchen, fitted up with steam and gas apparatus for cooking for 2,000 people at one time. The room is lighted and ventilated from the top by a lantern, and the walls are faced with glazed tiles. There are two hatchways between the kitchen and the dining hall. The scullery adjoins the kitchen, and is fitted with eight porcelain sinks, with hot and cold supplies to each.

The wings on either side of the central block contain, on the south side, the matron's drapery store, cutting-out room, and a long needle room for inmates; and on the north side, a row of workshops for boot-making, tailoring, and other light trades. The basement provides accommodation for stores. On this floor also is a large bakery. At the north-west corner of the building is the boiler house and a 100 ft. high chimney shaft and smiths' workshop, &c.; the former is fitted with three large double-flued Lancashire-type boilers, made by Tinkers, Limited, of Hyde, near Manchester. These are capable of working at a daily pressure of 80 lb. on the square inch, and will supply enough steam to heat the whole of the buildings on the site.

Adjoining the entrances to the main corridor, on the ground floor, are two staircases, which lead up to the first floor, and give access to the chapel, chaplain's room, and library adjoining, which are placed over the centre of the block. The chapel is seated to hold 550 people. At the west end there is a gallery, upon which an organ (by C. H. Walker) has been placed. The walls are faced with buff glazed bricks, above a dark tiled dado, and relieved with bands of red pressed bricks and green majolica strings. The open timber roof is constructed of pitch pine and yellow deal, slightly stained and varnished. The floor is laid with pitch pine blocks, the chancel being paved with glass mosaic.

The south wing contains on the first floor, a female sick ward for special cases, also isolation wards; and there is a similar ward for males in the north wing. The remaining parts of the first floor of both wings, and also the second floors, are occupied by maternity and convalescent wards and dormitories for mothers with infants. These wards are approached by two staircases (one in each wing), which are fitted with lifts, worked by water pressure from the mains of the London Hydraulic Power Company. The maternity wards comprise two separate and distinct wards, cut off from one another by cross-ventilated passages, and each has a small labour room adjoining it. Means of escape from fire are provided on the upper floors by the provision of light iron bridges connecting the two blocks. All the wards, large rooms, and chapel are heated by low-pressure hot water pipes, circulating from steam heaters in the basement. The system is so arranged that each room can be shut off as desired by the nurses. And in addition, the large wards are fitted with large air-body ventilating stoves and thermhydric stoves. The ventilation of the wards is effected by means of numerous inlet shafts and outlet flues at ceiling level. The dining hall is heated by steam coils round the walls. All other rooms are fitted with open fires. Four large tanks, each with a capacity of 2,000 gallons, are fixed in the towers at each corner of the building. The whole of the building is lighted throughout by electricity, but gas is provided at various points in case of necessity.

The buildings have been erected (from the designs, and under the superintendence, of Mr. Alfred Saxon Snell) by Mr. Charles Wall, of Chelsea, whose contract for the work amounts to 48,500*l*. The clerk of works was Mr. Frederick W. Lee, and the general foreman was Mr. W. Morgan.

The whole of the general engineering work, including the fitting up of the kitchen, has been carried out by Rosser & Russell; the electric lighting by Joel & Co.; valves by Dewrance & Co.; the hydraulic lifts by Waygood & Co.; floor tiling by Braby & Co.; wall tiling in kitchen by Minton & Co.; wall tiling in chapel and principal entrance by Simpson & Sons; glass mosaic floors and walls in chapel by J. Rust & Co.; wall tiling in bath-rooms by the London Opal Tile Co.; glazed bricks in chapel, dining hall, &c., also porcelain baths, by Farnley Iron Company; fanlight openers and gearing by Leggett Bros.; granolithic floors by The Imperial Stone Company; the whole of the roof glazing provided and fixed by the British Challenge Glazing Company; thermhydric and air-body stoves by Potter & Sons; boilers by Tinkers, Limited; and the electroliers in dining hall and chapel, and sanitary fittings, by Emanuel & Sons; the stained glass in the

chapel by Froy & Sons; the church furniture by Hammer & Co. and the Bennett Furnishing Co., who also made the dining hall seating and tables. The decoration of the dining hall was executed by Mr. Herrmann. The quantities and measurements were carried out by Messrs. Northcroft, Son, & Neighbour.

In completion of the scheme of the Guardians for remodelling and improving the workhouse, a contract has just been concluded with Messrs. Bywaters & Sons, for the erection of a new block of buildings on the Marylebone-road side of the workhouse at an estimated cost of 59,348*l.*

## THE SURVEYORS' INSTITUTION.

A MEETING of the Surveyors' Institution was held on Monday in the temporary premises of the Institution, Savoy-street, Victoria Embankment, when the paper read was by Mr. H. T. Eve, and was entitled "Compensation Values of Cattle Foods—Chemist *v.* Valuer."

The following Student Candidates have passed the Examination for the Professional Associateship :—

A. G. Andrews, Chester; H. B. Baverstock, Abingdon; E. C. Bedwell, Carlton Colville, near Lowestoft; C. W. Berry, Wimbledon; G. A. Blyth, Barnes; T. E. Butcher, St. Albans; H. F. Carr, Waltham Abbey; F. L. Chattell, London; F. S. Chesterton, Kensington; N. Clark, jun., Durham; J. Constable, Wandsworth; F. H. A. Dancaster, Boscombe; C. R. Field, Anerley; N. M. Foulkes, Tring; G. E. H. Graham, Hampstead; J. E. Gripper, Battle; R. C. Hassett, London; J. F. Hawkins, Bromley; H. Heal, Pinner; H. C. Heath, Blackheath; H. Hinks, Croydon; M. G. Humphry, Royston; R. E. Jackson, Carnforth; R. Johnston, Swindon; R. Leake, Wood Green; J. Lewis, St. Albans; D. Lloyd, Brixton (Institution prize, 1898); F. R. Lumley, Downton; W. M. Marcus, New Wandsworth; F. R. Mark, Forest Gate; E. E. Meacher, Barnet; S. G. Meacher, Malvern Link; S. S. Orchard, Leek; F. A. Pearce, Willesden Green; T. W. Pearse, Modbury; C. E. Pease, Wimbledon; C. O. Rawstron, Rotherham; C. F. Redfern, Northfield, near Birmingham; R. G. G. Reed, Croydon (special prize); W. F. Robbins, Crockshard, Wingham, near Dover; S. Searle, Ealing; H. Sheldon, Middlewich; H. O. Stallard, Leighton Buzzard: W W. Tremlett, Downton; J. G. Weall, Watford; C. S. Weekes, Tunbridge Wells; H. Welsh, Cockermouth; H. G. B. Wyatt, Chichester; J. D. Young, Highgate.

The following Non-Student Candidates have also passed the Examination for the Professional Associateship :—

A. Allsebrook, Wollaton; H. G. Andrews, Chelsea; F. H. Angel, Kensington; E. G. Attlee, Upper Tooting High-road; A. E. Bache, Blackheath; G. C. Baker, Lewes; S. A. Barns, London; L. Barrett, Southport; C. W. B. Barton, Wimbledon Hill; F. R. Betenson, London; J. C. L. Bettridge, Wimbledon; T. Bibbey, Llandudno; A. E. Bradshaw, Ramsgate; A. A. Brown, Croydon; T. Brown, Whitehaven; C. F. Burroughes, Middleham; A. K. Burtenshaw, Hailsham; R. R. Burton, London; C. H. Campbell, Eaton Hastings, Faringdon; S. D. Chadwick, London; F. J. Cole, Bristol; C. G. F. Culverhouse, London; C. T. Darnell, Blaby; G. C. Dawson, Nuneaton; F. B. Dyer, Lewes; A. R. Ellis, Bedford; H. H. Foster, Accrington; R. S. Gardiner, Aberystwith; J. S. Goadby, Highgate; O. J. Healing, Highgate-road; C. S. Hodges, Nottingham; M. M. Holl, Northampton; A. W. Hudson, Walthamstow; J. A. Jones, East Acton; P. E. Jones, Ealing; C. F. D. Lang, Weybridge; J. S. Melbourne, Fairford, Gloucestershire; A. Morris, London; H. T. Mullett, Cambridge; J. O. Nesbit, Levenshulme; G. M. Nicholson, London; J. Nutter, Whitehaven; C. S. Orwin, Wye; D. F. Pearce, London; A. T. Priestman, Bradford; H. C. Robertson, Battersea Park; P. W. Rogers, Putney Hill; F. R. Seller, Bromley; F. Smith, Maidstone; G. H. Smith, New Maldon; P. W. Smith, Finsbury Park; J. McC. Speakman, Crewe; F. W. S. Stanton, Chatham; F. S. Sutton, Brixton Hill; H. Swan, Upper Tooting; C. J. H. Thomas, Hampstead-road (Driver Prize and Penfold Silver Medal); W. J. E. Thomas, Oakridge, near Cardiff; W. E. Trent, Stratford; M. H. Ward, St. Helen's; H. A. C. Warmington, London; G. F. Weatherill, Edensor, Bakewell; R. S. Wigram, London; P. L. A. Williams, Battersea; J. Wilson, Lichfield. *Irish Candidates.*—H. E. Kincaid, Dublin; H. Waring, Waringstown, Co. Down; H. R. B. Wood-Martin, Dublin.

The following Professional Associates have passed the Fellowship Examination in Division IV. :—

F. S. A. Banks, Stamford Hill (Penfold gold medal); G. L. Barker, Llyndir, Rossett; P. S. Bidwell, Ely; C. Blackshaw, Kilburn; E. H. Blake, Balham; E. Blount, London; M. C. Blunt, Hyde-park; G. L. Brighton, East Dulwich; S. G. Carnell, Rushton, Wellington; H. Carpmael, West Dulwich; A. S. Cartwright, Crewe; G. A. R. Chamberlain, Malvern; W. Clarkson London; H. Collins, London; K. N. Crowther, Clapham Common, S.W.; W. Denton, Wadsley Bridge; *C. G. Eve, Bedford; H. C. Farmer, London; J. H. Furmedge, Middleton Stoney, Bicester; H. A. Glover, London; J. N. Grierson, Cheshunt; W. E. L. Jenkinson, London; E. J. Jones, London; W. T Lamprill Stratford; E. B. B. Newton, Rochdale; C. Osenton, Croydon; S. H. Patch, Addiscombe; O. B. Pearse, Nuneaton; P. Peebles, Albury, near Guildford; C. H. Price, Camden-square; J. Richardson, jun., Stamford; T. R. Robinson, Kensington; J. T. Rook, Carlisle; C. H. Russell, West Kensington Park; H. Shearburn, Godalming; A. C. Skingle, Brixton; S. Skrimshire, Paddington; J. T. Sly, Forest Gate; A. C. Standen, South Kensington; L. H. Strouts, St. Mary Cray; B. Swanwick, Leek Woolton; *W. P. Theakston, Huntingdon; J. M. Theobald, Isleworth; W. Townend, Seacroft, near Leeds; H. B. Vinten, Ramsgate; S. G. Wheatley, London; L. R. Wilson, Manchester; R. S. Woof, Lowther, Penrith.

The following candidates have passed the direct Fellowship Examination in Division V.—

A. P. I. Cotterell, Bristol; J. H. Fry, Willesden; W. M. Kerruish, Douglas, Isle of Man; J. A. Maxwell, Banbury; A. F. Reid, London; J. S. Rowland, Burton-upon-Trent; S. P. Stewart, Arbury, Nuneaton; E. T. Tutt, Lewisham.

Twenty-five other candidates in the different divisions are referred back to their studies in their typical subjects.

## CIVIL AND MECHANICAL ENGINEERS' SOCIETY:

### ANNUAL DINNER.

THE annual dinner of this Society was held on Thursday last week at Frascati's Restaurant, Oxford-street, the President, Mr. H. Coward, C.E., occupying the chair, supported by Captain Cecil Johnson, R.N., Professor Lobley, Messrs. B. Baines Dadley and W. Cooper Penn (Vice-Presidents), C. E. Cassal, C. B. Goring, Holroyd Smith, W. Noble Twelvetrees, A. T. Walmisley, Percy Field (Hon. Secretary), and others.

The loyal toast having been honoured, Mr. H. Ellis Hill proposed the "Army, Navy, and Auxiliary Forces," coupled with the name of Captain Johnson, who responded.

Mr. C. E. Cassal then gave the toast of the evening, "The Civil and Mechanical Engineers' Society." He said that the Society was one of the oldest societies concerned in the development of engineering work, having been founded in 1859. The Society met at frequent intervals to discuss matters of professional and scientific interest, and it succeeded in accomplishing, in a quiet way, a very good and valuable work. Engineers and scientific chemists often met in carrying out professional works for public bodies, and it had often struck him that there ought to be some understanding between them, in order that the mistakes which members of both professions were liable to make might be avoided.

The President-elect, Mr. B. Baines Dadley, in reply, said they were celebrating that night the 39th anniversary of the existence of the Society. The Society was founded for the purpose of discussing scientific subjects having special reference to engineering, and (he spoke from fifteen years' membership) that object had been worthily carried out. The papers which had been read before them were generally acknowledged to have been of great use to civil, mechanical, electrical, sanitary, gas, and water engineers. The work of the Society had been carried on without any endowment or reserve fund, and it had depended entirely upon the subscriptions of members. What they aimed at was the promotion of sociability at their meetings. This was absent in large societies, where most members were strangers to each other; and in his opinion the success of their society was largely due to their aim in this direction. But they desired to put their society in a better position, and an object they had in view was to obtain suitable offices of their own, where their meetings could be held. At present they were meeting at different hotels; but what they desired to do was to obtain suitable accommodation of their own, where they could house their library, and where their members could meet.

Mr. A. T. Walmisley, in giving the toast of "Kindred Societies," said that there was no scientific society which had not some connexion with engineering. As to their Society, at the time it was started the Institution of Civil Engineers was essentially an institution for civil engineers, but since then that Institution had, as their Society had from the first, combined other branches of engineering work with that of civil engineering.

Mr. Holroyd Smith having briefly replied, Mr. W. Cooper Penn proposed the toast of "The Press," coupled with the name of our representative, who responded.

Mr. W. A. Twelvetrees then gave "American Engineering Institutions," coupled with the name of Mr. Charles B. Goring. In the course of his remarks he referred to the competition and rivalry between engineers and the engineering trades of the two countries. A little rivalry was a good thing sometimes, and if Americans were able to undersell us in our own markets, the fault was our own, and, perhaps, was due to too much outside control of engineering workshops—a state of things which was somewhat altering now, he hoped. It would be a great advantage when the British workman would think for himself instead of blindly following his leaders.

Mr. Goring, editor of the *Engineering Magazine*, replied. The other toasts were "The President," proposed by Mr. C. R. Lee, and "The Officers of the Society," proposed by Mr. Rowland G. Foote, and responded to by Mr. Percy Field.

* Bracketted equal, Crawter prize.

## THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of this Council was held on Tuesday in the County Hall, Spring-gardens, Mr. McKinnon Wood, Chairman, presiding.

*Loans.*—On the recommendation of the Finance Committee, it was agreed to lend the Hackney Vestry 6,270*l.* for additions to the Vestry Hall and offices; the Hampstead Vestry 3,025*l.* for public convenience and for wood paving; the St. Olave's Guardian Board 18,900*l.* for the erection of Board-room and offices; and the Metropolitan Asylums Board 78,023*l.* for purchase of land and erection of buildings.

*Tramways.*—The Highways Committee reported as to the purchase of tramways of the London Tramways Company dealing with a portion of the South London lines, extending from St. George's in the Borough to the Horns at Kennington, and from St. George's to the Bricklayer's Arms. This Mr. Benn, the Chairman of the Committee, explained was practically the heart of the company's system, and as nearly the whole of the remainder of this company's section would fall in within three months the company was prepared to negotiate for the whole purchase. The Committee recommended: "That the Highways Committee be authorised to consider and advise the Council on any proposals which may be made by the London Tramways Company with reference to the portion of the company's system to be transferred on June 30, 1898, to the Council under Sir F. J. Bramwell's award; but that in view of the possibility of any proposals made by the Company not being such as the Committee can advise the Council to accept, the Committee be also authorised to make all necessary arrangements for the working by the Council itself, after the date named, of the portion above referred to of the Company's system, and for the purchase of cars, horses, and equipments, and the provision of such additional stabling accommodation as may be necessary; provided that no liability be incurred until an estimate should be submitted by the Finance Committee." This was agreed to with this rider, proposed by the Earl of Onslow: "The Committee do report to the Council the nature of such proposals, with their reasons for not advising the Council to accept them, and what further steps they recommend the Council to take with a view to the working of the portion to be transferred with advantage to the Council and without inconvenience to the public."

*The Telephone Question.*—On the reception of a report of the Highways Committee recommending the Council to inform the National Telephone Company that the Council's consent to the breaking up the streets would be withheld until reasonable terms had been secured from the company,

Mr. J. W. Benn said that last year the company sent in a sketch showing what they proposed to do for London. The Committee, having examined the proposals, proceeded to arrange preliminary conditions in order that the rights of the Council respecting the streets of London might be amply protected. After the Council had given their consent to these conditions, but before they were sealed, the committee discovered that Manchester, Liverpool, and other provincial cities had secured much better terms

than those laid down in the Council's conditions. As the agreement had not been sealed, the committee then tried to make better arrangements, which should approximate more closely to those obtained by the provincial centres. He thought it a monstrous thing that the London subscriber should be charged 20*l.* while the Manchester subscriber could get the same accommodation for 10*l.* The Highways Committee had suggested to the company that 12*l.* 10s. would be a reasonable charge. The Council had offered to surrender all claims to a rent for the use of the streets or of transformer boxes, although a rental of 10s. was paid in Manchester for each transformer box and 5s. for each subscriber on the company's books. The company had refused all the conditions.

The report was agreed to.

*The Building Act: Devolution of Powers.*—The Local Government and Taxation Committee submitted a lengthy report dealing with the recommendations for the devolution of certain powers from the Council to the Local Authorities, which were formulated by the conference held in January, 1896.

The consideration of the report was deferred, but we are able to give the following proposals relating to the Building Act :—

I.—The Conference proposed : "That the powers of the Council to remove posts and obstructions under section 199 of the London Building Act, 1894, should be transferred to the Local Authorities." We think that this is a matter with which the Local Authority is quite competent to deal, and which may very well be left to them. We recommend :—(*a*) That the powers of the Council to remove posts and obstructions under section 199 of the London Building Act, 1894, be transferred to the local authorities.

II.—The Conference proposed : "That the power of sanctioning or of refusing sanction to the formation of new streets should rest in the first instance with the Local Authorities, it being left to the Council to confirm or reject the decision." We have carefully considered this matter and are of opinion that there is no objection to the Local Authority having the power asked for. We recommend :—(*b*) That the power of sanctioning or of refusing sanction to the formation of new streets, rests in the first instance with the Local Authorities, it being left to the Council to confirm or reject the decision.

III.—The Conference proposed : "That the powers relating to the appointment of District Surveyors, with the exception of the power of making by-laws for their guidance, should be transferred to the Local Authorities." The motion as originally proposed required the transfer of the by-law powers as well as the appointment of district surveyors, but an amendment was moved and carried for leaving the by-law powers to the Council. We would call attention to the fact that the resolution of the Conference is to transfer the appointment and not the duties of District Surveyors, though the arguments used at the Conference leave it somewhat doubtful whether it was the appointment or the powers of the District Surveyors which were desired. It appears by the shorthand notes that the question of the necessity for largely altering the existing Building Act areas was hardly discussed, and that it was admitted that the present system secured both uniformity and economy. The subject was exhaustively discussed in the evidence before the Royal Commission and the weight of experienced opinion appeared then to be against any such change ; the Sub-Committee, after full consideration, arrived at the same conclusion, and we therefore recommend :—(*c*) That the powers of the Council relating to the appointment of District Surveyors be not transferred to the Local Authorities. We would further point out that every District Surveyor has to make a return to the Council every month under Section 160 of the London Building Act, 1894. This return consists of three parts, the first gives a list of all building operations of which the District Surveyor has had notice, or which he has discovered ; the second gives a list of all the works, &c., which are finished, with the fees chargeable ; the third gives the fees actually received, and those which are irrecoverable. We understand that the vestries desire to have the first part of this return, and we are of opinion that it should be furnished to them. We propose to bring up the necessary recommendations when the time arrives.

IV—.The Conference proposed : "That the powers of the Council relating to the approval of plans of buildings, to which Part VI. of the Building Act is inapplicable or inappropriate, to consent to temporary buildings, permission for the erection of wooden structures, departures from rules as to open space, cubical contents, height of buildings, &c., should be transferred to the Local Authorities, with the exception of the power of making by-laws." We have considered these matters, and we concur with the Building Act Committee, and with our Sub-Committee, that by reason of the difference in practice which would ensue if such matters as the licensing of departures from the statutory rules were transferred, it is not expedient to take the action proposed. We recommend :—(*d*) That only the powers under Section 84 of the London Building Act, 1894, relating to the erection of wooden structures outside the City of London, be transferred to Local Authorities.

V.—The Conference proposed : "That the powers of the Council to refuse to sanction plans of working-class dwellings where sufficient open space is not provided about such buildings, should be transferred to the Local Authorities." We think that, in the interest of uniformity in so vital a matter, this power ought to remain with the Central Authority. We recommend :—(*e*) That the powers of the Council to refuse to sanction plans of working-class dwellings where sufficient open space is not provided about such buildings be not transferred to the Local Authorities.

VI.—The Conference proposed : "That the powers of the Council to take action where it is certified to the Council that a structure is in a dangerous state, or where a structure is neglected, and, with a Magistrate's order, to repair or demolish these, and charge the cost to the owner, should be transferred to the Local Authorities. We see no reason why the Local Authority should not have these powers. We recommend :—(*f*) That the powers of the Council to take action where it is certified to the Council that a structure is in a dangerous state, or where a structure is neglected, and, with a Magistrate's order, to repair or demolish these, and charge the cost to the owner, be transferred to the Local Authorities.

VII.—The Conference proposed : "That the powers of the Council to consent to balconies, &c., and other projections beyond the specified distance, should be transferred to the Local Authorities." We think that owing to the complications that might arise, as is explained in the memoranda of the officers and of the Building Act Committee, it is undesirable to transfer this power, but we ought to point out that the Local Authorities are already consulted in these matters. We recommend :—(*g*) That the powers of the Council to consent to balconies, &c., and other projections beyond the specified distance be not transferred to the Local Authorities.

VIII.—The Conference proposed : "That the powers of the Council to remove unauthorised signs, on getting Magistrate's order, should be transferred to the Local Authorities." We see no objection to this transfer, but we think the Council should have power, as in other like matters, to act in default. We recommend :—(*h*) That the powers of the Council to remove unauthorised signs, on getting a Magistrate's order, be transferred to the Local Authorities, but that power be given to the Council to act in default of the Local Authorities.

IX.—The Conference proposed : "That the powers of the Council in regard to the storage of wood and timber under sections 197 and 200 (11*h*) of the London Building Act, 1894, should be transferred to the Local Authorities." (This will include the transfer of the penalty clause of the Act also.) "That the powers contained in section 170 of the London Building Act, 1894, with respect to the demolition of buildings erected in contravention of that Act, should be exerciseable by the Local Authority in like manner as by the Council." We are advised that, with regard to section 197, it would appear that a Local Authority could now, if it thought fit, proceed for offences against that section, but that with respect to section 170 a Local Authority could not (except in the case of buildings and structures beyond the general line) act under that section, inasmuch as the section, in terms, only gives the Council power to serve the notice on which proceedings are based. We think that the Local Authorities should have powers concurrently with the Council in regard to storing wood and timber and in regard to the demolition of buildings erected in contravention of the Act, but that the powers of the Local Authorities should be limited under the latter section to cases where they have obtained the convictions upon which demolition proceedings are based. We recommend :—(*i*) That powers be given to the Local Authorities concurrently with the Council to take proceedings with regard to the storing of wood and timber under Sections 197 and 200 (11*h*) of the London Building Act, 1894, and in regard to the demolition of buildings erected in contravention of the Act, under Section 170 subject to the powers of the Local Authorities being limited under the latter section to cases where they have obtained the convictions upon which demolition proceedings are based."

*Waterloo Bridge.*—The Bridges Committee reported as follows, the recommendation being agreed to :—

"In January, 1892, the Council gave directions for the tops of two and a half arches, carrying part of the southern approach to Waterloo Bridge, which was constructed in the year 1817, to be asphalted to prevent the leakage of water into the archways, at a cost of about 1,000*l.* Since that time we have received complaints from the occupiers of the remainder of the arches, forty-five and a half in number, of the percolation of water, which has not only seriously damaged the goods stored therein, but has acted injuriously on the structure of the arches. The total number of vaults under the approach road is forty-eight, nine being held on a lease for ninety-nine years at a peppercorn rent, which expires at Midsummer, 1921, when a rent of 200*l.* will be paid for the same; two vaults under the approach connected with the 'Feathers' public-house is held on a yearly tenancy of 20*l.*, and thirty-seven vaults are held on a lease of ninety-nine years, which expires at Midsummer, 1924, at an annual rent of 390*l.*, making in all a gross rent of 410*l.* per annum. The engineer reports that the water has caused damage to the brickwork of the arches, which have been built with only lime mortar and a protective layer of clay puddle. The complaints of the tenants have been many and frequent, and in consequence of the openings which have been made in the approach road, the paving and the layer of protective clay puddle have been much damaged. Annoyance has also been caused to the public by the frequent interference with the traffic through the openings which have been made from time to time in the road. The difficulties experienced in fixing the responsibility for the leakage and of recovering the cost of making the openings have been great. Two water companies have mains in the approach, the householders own the connecting pipes, while the Local Authorities control the sewers, and defects in any of these may cause the leakages. Litigation has also been threatened both by the occupiers and the Local Authorities. We think, therefore, the Council should take measures for putting an end to the cause of the difficulties, as we are advised that the duty of supporting the road devolves upon the Council. Various steps have been taken, but they have proved ineffectual, and the engineer has informed us that the only course to be taken to prevent the deterioration of the arches by water is to carry out similar work to that which has been already carried out on the two and a half arches previously referred to, and which has proved effectual, viz., to cover the arches with a continuous layer of asphalte 1 in. in thickness, with 12 in. of Portland cement concrete, the water being conducted to an iron drain pipe built into the centre of the spandril and brick pier of each arch, and each of the drain pipes connected with the local sewer near the foundations of the piers, provision being made for the water, gas, and hydraulic mains of the several companies being carried on concrete spandril walls. The estimated cost of the work, including the reinstating of the carriageway and footway paving, and a length of about 33 ft. of carriageway spanning Belvedere-road, is 11,700*l.*, which has been provided for in the maintenance estimates for this year. With regard to the carrying out of the work, we have come to the conclusion that the best course for the Council to take is to invite tenders, the prices in which will form a schedule for the work, and with that object we recommend—That the work in connexion with the repairing of the tops of the arches in the southern approach to Waterloo Bridge be carried out in the manner above-mentioned for the purpose of preventing leakage therein, at an estimated cost of 11,700*l.*, and that the Bridges Committee be authorised to invite tenders for the work."

The Council adjourned soon after 7 o'clock.

## COMPETITIONS.

GAOL, BERWICK.—At a meeting of Berwick Town Council recently, it was stated that thirty architects had submitted plans for the new gaol at Berwick, and that five had been selected, viz. :—Messrs. R. Burns Dick, Newcastle ; Charles Frederick Short, London ; Stephen Piper, Newcastle ; Fetch & Triggs, London ; Charles T. Marshall, Newcastle. The estimated cost varied from 3,500*l.* to 5,000*l.* The plans of Mr. Dick have been selected.

PROPOSED MUNICIPAL BUILDINGS, GODALMING.—The Town Council have determined to invite the following architects to submit designs for the proposed municipal buildings for Godalming :—Messrs. Ardrow & Dawson, Westminster ; Mr. Charles Bell, London ; Messrs. Colson, Farrow & Nisbet, Winchester and London ; Mr. John Johnson, London ; Messrs. Lanchester, Stewart & Rickards, London ; Mr. Henry Moon, Godalming ; Mr. E. R. Robson, Westminster ; Mr. J. W. Stevens, London; Mr. A. H. Tiltman, London; Mr. A. H. Verstage, Godalming ; Mr. Samuel Welman, Godalming ; and Messrs. Woodhouse & Willoughby, Manchester. Mr. E. W. Mountford has been appointed assessor.

SWIMMING BATHS, ROMFORD.—The Urban District Council of Romford having decided to erect Public Swimming Baths in Mawneys-road, Romford, invited designs from architects, and have selected for execution the design submitted by Messrs. Harrington & Ley, of 108, Fenchurch-street, E.C.

TOWN HALL, TAUNTON.—The result of the competition for a Town Hall at Taunton has just been made known. The first premium has been awarded to Messrs. Samson & Cottam, Taunton ; the second to Mr. J. M. Brydon ; and the third to Mr. H. T. Hare. Mr. Mountford was the assessor.

# Correspondence.

*To the Editor of* THE BUILDER.

## WALTHAM ABBEY.

SIR,—Your serial history and the beautiful drawings of Mr. Rowland Paul in the *Builder* for April 2, 1898, have revived once more the ever recurring debate as to the date and style of this most interesting church—or, rather, part of a church. In 1896, the Council of the British Archæological Association honoured me with the request that I should conduct one of their Congress meetings over the remains of this once very extensive building. At that time I was not a stranger to the church referred to, but in preparation for that meeting I went to Waltham Abbey and stayed there for some days, and worked each day early and late in the study of the remains and in making drawings and measurements of its details. This resulted in the production of a paper which was read at the meeting held at the church. In the journal of the Association for last year this paper and some illustrations were published. That paper concludes with the following words :—"What, in my humble view, is significant, is the fact that not a single particle of Saxon design or workmanship is present in the building, except possibly a fragment in the lower part of the Eastern face of the south transept west wall, and the small quantity of external rubble facing in the south aisle. But, on the other hand, the design, the workmanship, and the ornamentation are all Norman, and in all probability Norman oversight controlled the work." Stronger expressions on this point might have been made use of; in fact it might almost as well be asked whether the building is Greek as Saxon. It is known now, without a doubt, that the characteristics of Saxon architecture are as forcibly marked as are those of every other well-defined style. And in my view no one with practical knowledge on the subject of Saxon detail or design will venture to say that there is a single trace of distinctive Saxon detail in this building. On the other hand, every one who has studied without bias, and uninfluenced by what historians have said about Harold building a church at Waltham, must admit that the church (speaking broadly) is Norman in conception, in design, and in execution from base to summit.

Mr. J. Arthur Reeve had the best of opportunities for the most detailed study of the building, and his paper thereon in respect of certain details has assuredly to be reckoned with; but it would seem almost that the influence of details on his mind, as recorded by him, has led him away, in his apparent anxiety to find at least some of Harold's work, from the greater generalities of the fabric. Take but a single instance which is named in my paper before referred to. "The bays of the nave arcades are not treated as a repeat of a single bay, but are grouped into pairs, with a main and a minor pier to each pair, and each main pier has a semi-shaft next the nave running from floor to roof; but the corresponding shaft over the smaller piers starts at the level of the sill string to the triforium story." This general design of plan and elevation for the whole of the nave would seem to determine the unity of design of the whole existing building, and other points of the same import might be mentioned. As to the various dates in Norman times, when different parts were completed, that does not, of course, touch the question as between Saxon and Norman style.

Except for the historical record before mentioned, it is hard to conceive that any one could hesitate on the subject of the style of the building. But the record is a historical difficulty, and not an architectural one, and may, from the point of view of style of architecture, be left to the learned historians to clear up. If the measured drawings of Mr. J. Arthur Reeve, deposited in the library of the R.I.B.A., could be published, much information would be gained.

C. LYNAM.

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SIR,—The correspondence in your columns about Waltham Abbey, especially the interesting letter of Mr. Reeve, induces me to ask your permission to bring forward the plan of the monastic church of Carlisle as being curiously like to that of Waltham in one particular.

They are alike singular in that the outer walls of the body of the church are just about half the thickness of the inner walls.

It is most improbable, therefore, that these walls are of the same date, or that they came from the hands of the same workmen—the one are of the usual thickness of Norman walls, the other of that thickness peculiar to an earlier type of work.

At Waltham Abbey, the evidence of these outer walls being Saxon is pretty conclusive, for the whole story may be read in the wall at the end of the present south aisle, which is the west wall of the ancient south transept.

On its eastern face, which originally formed the inner face of the wall, you may see the Saxon work up to the first string course, with the slanting or herring-bone fashion of laying the stonework peculiar to that type or period. The string course is Norman, and all the walling above it, and very strange the window looks in so thin a wall.

Outside, the Norman builders apparently refaced the walls and added pilaster buttresses to them.

At Waltham Abbey, the walls of the transepts are equally of the thin-walled type. At Carlisle they are of the normal thickness of Norman walls, as were also the walls of the eastern apses discovered in 1892, which showed a very northern type of walling.

At Waltham we have, apparently, in the lower portions of these outer walls, the actual work of Harold, and though I agree with Mr. Reeve that the western arches of the nave are earlier than the two eastern ones, the one showing a concrete soffit and the other a complete stone encasement to the inner order of the arches, I cannot think that walls of this type and character were in use in England at so early a date.

It appears to me to follow that the Norman builders restored the outer walls of Earl Harold's church of Waltham Abbey with additions and ornaments of Norman type, and that they entirely rebuilt the walls of the nave arcade; a very natural course for them to adopt, inasmuch as the division between the nave and aisle of a Saxon church was in the nature of narrow arches pierced in a continuous wall rather than an arcade.

At Carlisle, the transepts with their apsidal chapels are clearly Norman work from the bottom, and the narrow outer walls of the nave follow them exactly in being decked out with similar details.

At Waltham, marks of the groining of the aisles are apparently visible.

At Carlisle, although the outer walls were provided with shafts to receive arches, it is clear that none were attempted.

It has been suggested that churches of the size of Waltham or Carlisle were unknown in Saxon times, but the admirable paper of Mr. Micklethwaite's on Saxon Churches, recently published in the Transactions of the *Archæological Journal*, and the plans which illustrate it, go far to disprove this assertion; and I have therefore added in a foot-note a comparison of the principal dimensions of Waltham Abbey and Carlisle with those of the Saxon churches of York and Peterborough given in Mr. Micklethwaite's paper.

CHARLES J. FERGUSON, F.S.A.

SIR,—I have no desire to take part in a renewal of the controversy as to the date of the nave of Waltham Abbey, but I should like to make one or two remarks on the general questions raised in the letter from Mr. J. Arthur Reeve which appeared in your issue of the 7th inst.

Mr. Reeve suggests that Harold was so much impressed with the buildings which he saw in Normandy that he brought men over to England from the Continent to carry out his new works at Waltham Abbey. If this were so, these men must, indeed, have been remarkable, for at Waltham they must have anticipated the manner of building which only prevailed in their own country some half century after Harold's time. There is nothing in the buildings in Normandy known to be of Harold's time which affords the least support for the theory that he built the western bays of the nave of Waltham. The date of 1062 for this work is almost as impossible in Normandy as in England. The scalloped capital is not to be found in Normandy in buildings erected before the end of the eleventh century. The subdivision of the capitals of the great circular piers to receive the arch orders, and the prevalence of the chevron ornament in the arches at Waltham alike point to the twelfth century rather than the eleventh. Mr. Reeve considers that the Abbaye aux Hommes at Caen is a standing proof of the fact that Norman architecture was more developed in Normandy before the Conquest than it was in England after the Conquest. I doubt whether this opinion can be maintained, for it is undoubtedly in the earliest works in England after the Conquest that we find the closest similarity to contemporary work in Normandy; *e.g.*, the chapel in the tower of London, the remains of Remigius' work at Lincoln, the nave of Blyth Church, Notts, and the chapel in Durham Castle. It is natural enough that it should be so, seeing that the buildings in both countries were erected by the same men.

If we are to believe that the western bays of Waltham are Harold's work, we must hold that after the Conquest Norman builders, both in Normandy and England, deliberately ignored this astonishingly advanced work, and persisted in the far ruder and less developed manner in which they had hitherto been working; and that it was only after some fifty years of gradual development that they reached the precise stage at which Harold's builders had arrived in 1062. And we must believe this in spite of the fact that the half-century in question covers the earlier part of the most active period of church-building which our country has ever seen, a period, too, during which the majority of our great churches were being either built or rebuilt.

JOHN BILSON.

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SIR,—I am much obliged to Mr. Reeve for the information in his letter in your issue of May 7. I was acquainted with the measured drawings, and with the breaks of design in the nave. I did not enter into the question of the chronology of the eastern and western portions of the nave; because I hold that whichever was the earlier portion, it was not built before the twelfth century. I may say that far too much importance has been attached by archæologists to small breaks in design.

Mr. Reeve practically concedes that Waltham is more advanced in style than any building in England of the eleventh century. He implies that it is not, however, more advanced than the eleventh century work of Normandy. The very reverse is the case. Look at the characteristic work of the eleventh century at Bernay, Jumièges, Graville, St. Nicholas Caen, and the Abbaye-aux-hommes; the Ionic caps, the square-edged arches, the simple clearstories; you will find nothing so advanced as Waltham.

So that we are driven to conclude, first, that Harold's architect borrowed from Normandy a design superior to anything existing in Normandy; and, secondly, that this superior design existed unnoticed, unadmired, uncopied, at Waltham for nearly forty years, till it was caught up at Durham. Whereas we know that in those days an architectural fashion passed from city to city as rapidly as nowadays the latest thing in mantles and bonnets.

I find that M. Ruprich-Robert says that Waltham is neither Saxon nor of the date 1062; but that it resembles in style the buildings erected towards 1130.

FRANCIS BOND.

| | THE NAVE AND AISLES. | | | | | | TRANSEPTS. | | |
|---|---|---|---|---|---|---|---|---|---|
| | External Walls. | Arcade Walls. | Width of Aisles. | Width of Nave. | Width Between Walls. | Length of One Bay, Centre to Centre. | Total Length. | Width. | Walls. |
| Waltham Abbey | Under 3 ft. | About 5 ft. | 10 0 | 25 0 | 55 0 | 15 0 | 98 0 | 27 0 | Under 3 ft. |
| Carlisle | Under 3 ft. | Over 5 ft. | 15 0 | 22 6 | 63 0 | 17 0 | 113 0 | 21 0 | Over 6 ft. 6 in. |
| Peterborough | Under 3 ft. | About 3 ft. | 11 0 | 33 0 | 61 0 | 17 6 | 100 0 | 33 0 | Under 3 ft. |
| York | — | — | 15 0 | 31 0 | 68 0 | 17 6 | 117 0 | 29 0 | A little over 3 ft. |

These figures are approximate only.

*** We may mention that in the last sentence of Mr. Reeve's letter in our issue of May 7, the word printed "arguing" should have been "agreeing." The proof was returned too late for correction.—ED.

## WESTMINSTER BUILDING DISASTER.

SIR,—As I find that some misconception has arisen, may I beg the favour of your insertion of a note in your next report of this case, to the effect that I am in no way concerned with the buildings in question.

JOHN W. SIMPSON, A.R.I.B.A.

10, New Inn, Strand, London, W.C.

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NEW PIER, THE MUMBLES.—The new pier which has just been erected at the Mumbles, is built out from a point just inside the Inner Sound and under shelter of the Mumbles Head. The pier extends out into the sea about 830 ft., the width of the neck is 25 ft., there is a central widening 60 ft. long by 40 ft., on which there are shops, while the pier head forms a promenade 135 ft. long and 84 ft. wide. Here is erected a band-stand. Round this pierhead is a wooden landing-stage with landing-steps. The cost has been about 16,000*l.*, and the work has been carried out by the Widnes Foundry Company, from the designs of Mr. Sutcliffe Marsh, the engineer.

# Illustrations.

## ST. MARK'S, HARROGATE.

THIS church is being built on a site given by Mr. Paley. The surrounding property is rapidly being covered with good residences, and in time promises to become one of the most important parts of the town.

The nave and aisles are the only parts so far contracted for, but it is hoped that the chancel and the tower will follow before long. The contractor is Mr. Rudd, of Grantham. The present work will cost between 7,000*l.* and 8,000*l.*

The architect is Mr. J. Oldrid Scott. The drawing is exhibited at the Royal Academy.

## "MIEFIELD," KIRKCUDBRIGHTSHIRE.

THIS house has been built for Mr. Walter Neilson, of Errenfield, Ayr, on a fine site on the edge of the moorland, a few miles north of the county town of Kirkcudbright, and is to be used as a shooting-box. It has been built of local brick and rough-cast, a very little dressed stone being used to emphasize the principal entrance, the drawing-room bay, and the two main gables. The roofs are covered with Elterwater green slates, with grey concrete ridges. The interior is entirely finished in timber, the hall, dining-room, and drawing-room being panelled to the tops of the doors. The hall forms the central point of the plan, and with the dining and drawing rooms opening out of it at opposite ends, forms a fine suite of rooms. A strong point has also been made of good and direct service to the dining-room, and of good servants' accommodation. Externally the house has been designed on a long plan, with one dominating roof-line, and has been treated in a distinctly Scottish manner, but with no exuberance in matters of detail. The view now reproduced shows the character of the surrounding country, and the endeavour has been made to make the house harmonise with its surroundings. The house is lighted by acetylene gas, which has been found very suitable, and very easily managed. A good gravitation water supply has been provided, and advantage has been taken of the considerable pressure obtained to fit up fire-hydrants at several points outside and inside the house. The works also included stabling and man's house, and the renovation of the farmsteading. The contractors were: mason work, Messrs. A. R. & J. Lindsay, Dalbeattie; joiner work, Mr. D. Milligan, Ayr; slater, plumber, and rough cast work, Mr. J. C. Highet, Ayr; painter work, Mr. Brodie, Castle Douglas; and gasmaking plant, Messrs. Read, Holliday, & Co., Glasgow. Messrs. Longden & Co.'s grates were used throughout the house.

JAS. KENNEDY HUNTER.

## BROOM HILL, OXSHOTT, SURREY.

THIS is an illustration of a house now in course of erection upon the crown of Broom Hill, Oxshott, Surrey, commanding a very fine view of the surrounding country. The foundations are now being put in, and the roads made by the owner.

The walls are built hollow, with local red brick facings and Portland stone dressings, and roofs covered with Broseley tiles. The windows are provided with double sets of casements as a protection against the exposed situation. The entrance is marked by the entire bay and gable being built with Portland stone ashlaring.

The small sketch plan gives the general arrangement of the ground floor, and the aspect, the principal rooms looking south-west. The principal feature internally is the hall and staircase, which will be lined throughout with oak panelling, cornices, and beams; and all the principal rooms and staircase are approached direct from the hall.

F. G. KNIGHT.

## SKETCHES IN CAEN AND NEIGHBOURHOOD.

THE Church of St. Etienne—the tower of which is shown in one of the sketches—is in the Rue de Chaumont, Caen. It is an elaborate fifteenth-century building in, unfortunately, a sadly neglected state, and used, not for religious purposes, but as a storehouse. There are, apparently, too many churches in Caen. The oriel window is on the first floor of a house in the Rue de Chanoines, near to the church of La Trinité, of the Abbaye aux Dames. Heronville—two sketches of its church are given—is some few miles out of Caen. The church has been unfortunate enough to fall into the hands of the restorer, with the result that the whole of the nave has been restored, or, to be more correct, rebuilt with entirely new materials, not a trace of the old work being visible. The chancel and tower have so far escaped. The window shown in the sketch is in the chancel, its glass is in a neglected state; the masonry is of coarse construction and detail. The modern work of this church compares very badly with the old; the appearance of the old work has been, of course, greatly improved by the effect of the weather on the stone work. The tower has weathered to a particularly good colour. The old church of Notre Dame, Bretteville, is some few miles from Caen. The tower shown in the sketch is all that now remains; the nave, chancel, and any other portions there may have been have vanished, leaving the tower alone standing on little more than four legs of masonry. The ground level is now used as a shrine. The remaining sketch is of another village church in the vicinity of Caen; its name has been forgotten. As will be seen, the tower is in a state requiring repair.

J. H. CORAM.

*The Coopers' Company Almshouses, East London. From a sketch by Mr. J. H. Coram.*

## THE COOPERS' COMPANY ALMSHOUSES.

IN the *Builder* for April 16 (page 367) we gave some account of this old building, which it is said is about to be demolished. Mr. J. H. Coram has kindly sent us the accompanying sketch of the building, which may be of interest as a record.

## APPLICATIONS UNDER THE 1894 LONDON BUILDING ACT.

AT a recent meeting of the London County Council, the Building Act Committee brought up the following list of applications under the 1894 London Building Act. Those applications to which consent has been given are granted on certain conditions.*

### *Lines of Frontage.*

*Islington, North.*—A one-story shop on part of the forecourt of No. 119, Stroud Green-road (Mr. F. L. Pither for Mr. P. Gardiner).—Consent.

*Wandsworth.*—Houses on the west side of St. Ann's Hill and The Grove (Mr. G. E. Withers for Messrs. Withers & Son).—Consent.

*Marylebone, West.*†—Stone balconies on the first, second, third, fourth, and fifth floors in front of a block of residential flats known as Abbey-court, on the site of No. 47, Abbey-road, St. John's Wood (Messrs. Metcalf & Greig).—Consent.

*St. George, Hanover-square.*—Wood and glass enclosures of two verandahs erected at No. 28, Park-lane, and overhanging the public way in that street and Upper Grosvenor-street respectively (Messrs. S. J. Waring & Sons for Mr. S. J. Waring).—Consent.

*Woolwich.*—Bay windows to seventy-six houses proposed to be erected on the north and south sides of Wernbrook-street, Plumstead (Mr. J. O. Cook for Mr. J. Wernham).—Consent.

*Chelsea.*—That the consent of the Council of April 4, to the erection of a one-story shop upon part of the forecourt of No. 183B, King's-road (Mr. J. E. Arpin for Mr. F. C. Woolmer) be modified by the omission of the words "dedicated to and" from such consent.—Agreed.

*Marylebone, East.*—That no order be made with reference to the application of Mr. W. J. Miller on behalf of Mr. H. S. Schwarz, for consent to a porch at the entrance to Nos. 88 and 90, Great Titchfield-street.—Agreed.

*Lambeth, North.*—An iron and glass covered way in front of the Waterloo Hotel, York-road (Mr. G. K. Deakin for Messrs. Deakin & Son).—Refused.

*Westminster.*—A projecting shop-front to a house with shop on the west side of Rochester-row, at the corner of Emery-hill-street (Mr. J. S. Quilter for Mr. K. W. Hedges).—Refused.

### *Deviation from Certified Plans.*

*Strand.*—Certain deviations from the plan certified by the District Surveyor, under Section 43 of the London Building Act, 1894, so far as relates to the proposed rebuilding of No. 29, Foubert's-place, Regent-street, St. James's (Messrs. Goodwyn & Sons, for the Lion Brewery Company).—Refused.

*Holborn.*—Certain deviations from the plan certified by the District Surveyor, under Section 43 of the London Building Act, 1894, so far as relates to the proposed erection of a block of residential flats on the site of Nos. 33 and 33a, Red Lion-square, and No. 11, Old North-street (Mr. E. J. Stubbs for Messrs. T. Millman & Co.).—Refused.

### *Artisans' Dwellings.*

*Greenwich.*—A modification of the provisions of Section 41 of the London Building Act, 1894, with regard to open spaces about buildings, so far as relates to the proposed erection of eight blocks of two-story buildings to be inhabited, or to be adapted to be inhabited, by persons of the working class on the south side of Old Woolwich-road, and that the plans submitted with the application of Mr. R. Plumbe for the Housing of the Working Classes Committee of the Council, be sanctioned.—Consent.

### *Lines of Frontage and Width of Way.*

*Hammersmith.*—The re-building of the "White Hart" public house, Nos. 357 and 359, King-street West, to abut upon White Hart-court (Messrs. Wylson & Long).—Consent.

*Hoxton.*—An addition to workshops at Nos. 65, Crondall-street, St. John's-road, Shoreditch (Mr. F. Tupper White, for Mr. J. Biggs).—Refused.

### *Formation of Streets.*

*Woolwich.*—That an order be issued to Messrs. Tapp & Jones sanctioning the formation or laying out of new streets, for carriage traffic, out of the north side of Elizabeth-street, North Woolwich. That the names Drew-road (in continuation), Fernhill-street (in continuation), and Silverland-street be approved for the new streets.—Agreed.

*Wandsworth.*—That an order be issued to Mr. A. G. Hastilow, refusing to sanction the formation or laying out, for carriage traffic, of a new street, 40 ft. wide, out of the north side of Lower Richmond-road (for Mr. C. Coward).—Agreed.

### *Means of Escape at Top of High Buildings.*

*Rotherhithe.*—That Messrs. Stock, Page, & Stock be informed that the Council, in the exercise of its powers under Section 63 of the London Building Act, 1894, is prepared to grant a certificate in respect of the means of escape, in case of fire, to be provided for the persons dwelling or employed on the top floor of a proposed addition to Messrs. Peek, Frean, & Co.'s biscuit factory, Drummond-road, Bermondsey.—Agreed.

SCREEN, EDWARD-STREET CONVENT, LURGAN.—The chapel attached to the Convent of the Sisters of Mercy, Lurgan, is being furnished with a screen. It divides the chapel into two divisions. The material used in its construction is pitch pine. The screen is the design of Mr. J. J. M'Donnell, Belfast. The work is being executed by Mr. M'Naughton, contractor, Randalstown.

* Names of applicants are given in brackets. Buildings are new erections unless otherwise stated.

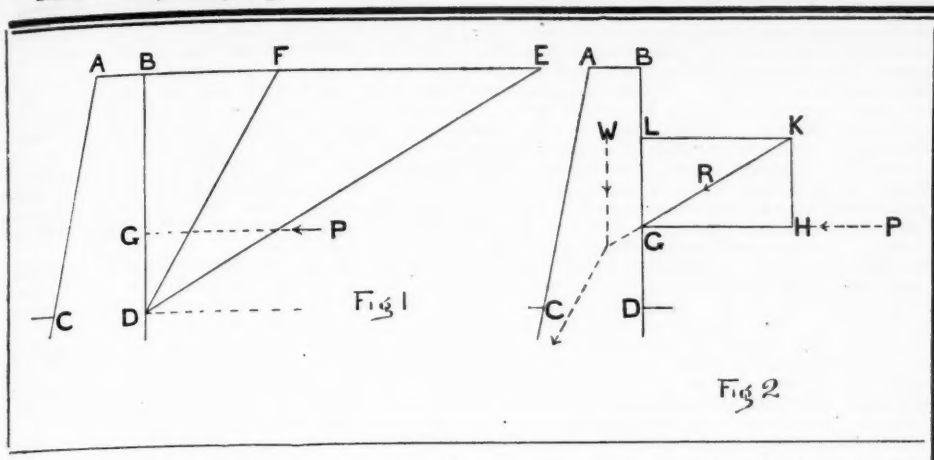


Fig 1




Fig 2

# The Student's Column.

## THE CALCULATION OF STRENGTH OF MATERIALS AND RESISTANCES.—XXI.

THE first difficulty which we have to face in attempting to estimate the amount of the overturning force on the back of a retaining wall is the determination of the natural slope or angle of repose of the earth which is to be supported. When one has to deal with an actual case it is sometimes possible to make a bank of an experimental nature with the earth that one has to deal with, and then by observation we can arrive at the natural slope of the earth in question. As a general rule sand, gravel, and earth when dry have a natural slope of one in one and a half, that is, the bank has a rise of 1 ft. to every 1 ft. 6 in. in width measured horizontally. This corresponds to an angle of 33 deg. 41 min. with the horizon. If the earth is moderately damp so that its particles cohere, it will very possibly stand at a slope of one in one, that is 1 ft. rise to each foot of the horizontal measurement. This is at an angle of 45 deg. with the horizon.

In all cases it is assumed that the wall is secure from sliding along its base, and that it is thick enough to prevent failure by bulging; therefore the only manner in which it can fail is by overturning about its outer edge. We say that it is assumed that the wall will not fail by sliding along its base or by bulging, although practically it does happen that retaining walls do fail in both of these ways from improper construction. But if properly built the thickness of the wall, which is sufficient to prevent its being overturned, will in almost all cases be sufficient to prevent it from bulging; and if the mortar or cement is as good as it ought to be there will be no fear of such a properly constructed wall sliding on its base if it is sufficiently strong to resist overturning.

Let us assume, as in fig. 1, that our retaining wall, A B C D, has a vertical back, and that the natural slope is represented by the line D E, then, as we said in our last chapter, the triangle B D E represents the section of the earth which is pressing upon the back of the wall. It is clear that the earth within the triangle B D E is partly supported by the earth below the natural slope B D E, and partly by the resistance of the retaining wall. It necessarily follows that in the triangle B D E part is exerting the greater pressure upon D E, and part the greater pressure upon B D, and if we bisect the angle B D E by the line D F, we have the triangle of maximum pressure B D F, in which the angle of maximum pressure is the angle B D F, whilst the line D F is the slope of maximum pressure.

The value of the angle B D F is easily found when, as we have assumed, the back of the wall B D is vertical, by subtracting the angle of the natural slope from 90 deg., and dividing the remainder by 2. And having found the angle we can, by trigonometry, find readily the area of the triangle B D F. The student who is ignorant of trigonometry can, however, by drawing to scale, find the dimension B F, and as B D is known, the area of the triangle B D F can then be found without recourse to trigonometry.

If we assume that the earth at the back of the wall is perfectly dry and devoid of cohesion so as to move readily, then if we suppose the wall to be removed suddenly the triangle of earth B D F would slide down under the influence of a force represented by P in our diagram acting at right angles to the face B D of the wall, the point of application G being one-third of the height D to B, whilst the amount of pressure P is:—The weight of the triangle of earth B D F $\times \frac{B\ F}{B\ D}$ which, of course, is equal to the weight of a single cubic foot of the earth multiplied by $\frac{B\ F^2}{2}$

The problem of retaining walls with earth at the back is not, however, yet completely solved when we have ascertained the amount, direction, and point of application of the pressure P, for if we suppose that the pressure is sufficient to cause the wall to overturn about the point C, directly it begins to turn a new force comes into operation, which complicates the problem. In order that the wall may turn about the point C it is clear that B D must rise, and as it rises it will, of course, rub against the surface of the earth hitherto resting against it. Thus friction will ensue between the face of the wall and the face of the earth in contact with each other. This friction is clearly also a retarding force, tending to prevent the wall from turning about the point C. And a wall, therefore, which is sufficiently strong and heavy to resist overturning by the force P is excessively strong when the friction of the earth is taken into account. The amount of this friction we can find most readily geometrically as in fig. 2, thus: From G draw to scale G H representing the amount of P found as above, then draw an angle H G K, equal to the angle at which dry earth will slip on the brickwork or masonry in question that is used for the construction of the wall. This angle is usually nearly the same as the angle of natural slope. Draw H K parallel to G B, complete the parallelogram G H K L, then L G or K H on the same scale as we originally drew G H is the amount of the frictional force on the back of the wall. Thus we have L G and H G representing in magnitude and direction two forces acting at the point G, viz., the force of friction and the horizontal pressure due to the weight of the earth. Consequently in the parallelogram G H K L the diagonal G K represents in magnitude and direction the resultant of the frictional force and the horizontal pressure, or, in other words, their combined effect in overturning the wall; this we will call R. We now have, therefore, the stability of the wall dependent upon two forces: R, the overturning force, and W, the weight of the wall acting vertically downwards through its centre of gravity; and their resultant Q, indicated by the dotted line, tells us whether the stability of the wall is sufficient to resist the overturning power of the earth behind it. If the direction of Q passes through the horizontal line between C and D at the point C the wall is on the point of being overturned. If between C and D the wall is stable, and for safety it is advisable that it should pass between C and D, in the middle third of the distance C D.

We can also test the stability of the wall by taking moments about the point C of the forces W and R. When the moment of W is greater than the moment of R, the wall is stable, when the moments are equal the wall is on the point of being overturned, and when the moment of R is the greater the wall is unstable.

ADDITIONS TO PERTH WATERWORKS. — At a recent meeting of the Perth Water Commissioners the buildings for the new engines at the water house were approved of. The addition consists of a new engine-house to be built to the south of the existing building. The elevation towards Marshall-place is carried out in the same manner as the elevation towards Tay-street. The plans have been prepared by Messrs. James Smart & Son, architects, Perth.

## BOOKS RECEIVED.

WAGES CALCULATOR. By M. B. Cotsworth. (Cotsworth, York.)

GREENWOOD'S TIMBER CALCULATOR. Second edition. (Baxendale & Co., Manchester.)

HANDBOOK TO ELY CATHEDRAL. Edited and revised by the Dean of Ely. (G. H. Tyndall, Ely.)

EMPLOYERS' LIABILITY AND WORKMEN'S COMPENSATION. By Thomas Beven. (Waterlow Bros. & Layton.)

THE WORKMEN'S COMPENSATION ACT.—By J. W. Innes. (Gee & Co.)

## *APPOINTMENTS.*

CLERK OF WORKS APPOINTMENT.—The Pokesdown Urban District Council, at their last monthly meeting, had three selected candidates before them for the post of Clerk of Works to the Main Drainage Scheme. Their names were Mr. W. Meates, Cambridge; Mr. J. Howell, Richmond; and Mr. Patterson, Ilkley. The voting resulted in favour of Mr. Meates, and that gentleman was duly appointed. There were fifty-four applicants.

## *OBITUARY.*

MR. HARRISON HAYTER.—This eminent engineer died at his residence, in Kensington, on the 5th inst. The deceased, who had reached the age of seventy-three, was one of the best known engineers in Westminster, having been connected in one capacity or another with practically all the most important works which have been carried out during the last half of this century. Educated in the Applied Science Department of King's College, London, he afterwards sought practical experience upon the Stockton and Darlington Railway, and was subsequently associated with the Great Northern Railway. In 1857 he was engaged by Sir John Hawkshaw, and in 1862 his connexion with the Institution of Civil Engineers commenced, and thirty years later he was elected President of that society. Mr. Hayter's chief work was in connexion with the Charing Cross and Cannon-street Bridges, the Severn Tunnel, the Holyhead and Alderney Harbours, the South-West India Dock in London, and the Amsterdam Ship Canal.*

MR. J. BURNET.—Mr. James Burnet, architect, died at his residence, Ewesbank, Langholm, N.B., on the 8th inst., in his seventy-third year. He belonged to the Melrose district, but about forty-four years ago he received the appointment of architect to the Duke of Buccleuch on his Grace's estates in Eskdale and Liddesdale, which he has held ever since.

MR. J. BLAND.—Mr. John Bland, who for many years practised as an architect in Temple-street, Birmingham, died suddenly in his office on the 16th inst. Mr. Bland was about seventy years of age.

## *GENERAL BUILDING NEWS.*

CATHOLIC CHURCH, TERENURE, DUBLIN.—On the 1st inst. the Archbishop of Dublin laid the foundation stone of the new Church of St. Joseph, now in course of erection in the parish of Terenure. The new church will comprise nave, side aisles, transepts, side chapels, sanctuary, and two sacristies, with heating chamber under. The total length of the church is 120 ft., width 30 ft. The aisles on each side of the nave are 48 ft. long by 14 ft. wide. At the end of the north aisle a baptistry is provided 12 ft. square, and a tower 10½ ft. square is at the end of the south aisle. The height from the floor of the church to the ceiling is 51 ft., and from the floor to the apex of the roof is 63 ft. The sanctuary and chapels are divided from the nave and the transept by moulded arches resting on columns having moulded bases and carved capitals. The aisles and transepts are divided from the nave on each side by an arcade of five bays. The columns throughout in the internal work are of polished red Aberdeen granite. The church is entered at the west front by a doorway having moulded jambs and carved and moulded capitals, and on the north and south sides by porches 8 ft. square. The west gable is pierced by a rose window 18 ft. in diameter with shafts radiating from the centre. The tower and spire rise to a height of 160 ft. The principal window of the sanctuary is a three-light window. Each bay of aisles and clearstory is lighted by three simi-circular windows. The style of the church is Romanesque. The contractors for the work are Messrs. Meade & Son, who are carrying it out from the designs and under the superintendence of Mr. Wm. H. Byrne, architect, Dublin.

RENOVATION OF AULDEARN PARISH CHURCH, NAIRN.—The designs of Mr. John Robertson, architect, Inverness, for the renovation of Auldearn Parish Church have just been approved of by the Building Committee; and the successful contractors for the various works are:—Masons' work, Messrs. Fraser & M'Intosh, Inverness; carpenters' work, Mr. William Brooman, Nairn; slaters' work, Mr. A. C. Fraser, Inverness; plumbers' work, Mr. John Stewart, Grantown and Nairn; painters' work, Mr.

* The above notice was unavoidably omitted from our last issue.

John Campbell, Nairn; and heating, Messrs. M'Kenzie & Moncur, Edinburgh.

CHURCH IMPROVEMENTS, NEWCASTLE, STAFFORDSHIRE.—Further progress in the completion of the Church of St. Giles's, Newcastle, and its surroundings has been made by the consecration recently of additional ground for the extension and improvement of the churchyard, and the dedication of the new oak pews which have been placed in the church, and a new stained-glass window at the south-west extremity of the nave. The work in the churchyard has been carried out under the direction of Messrs. Chapman & Snape, and the contractor is Mr. T. Goodwin, of Hanley; the ironwork being supplied by Mr. J. Sant, of Newcastle. The work in connexion with the provision of modern oak seating in the body of the church and the south chapel has been executed by Messrs. Jones & Willis, of Birmingham, from the design of Mr. John Lewis, architect, Newcastle. Three front pews on the south side of the middle aisle are allotted to the Mayor and Corporation on the occasions of their official visits. The new stained-glass window is of three lights, each panel containing two figures, and the whole design typifying the Transfiguration. The window has been supplied by Messrs. Burlison & Grylls, of London.

CHURCH, CANKLOW, NEAR ROTHERHAM.—The foundation stone of a new church was laid at Canklow on the 12th inst. The building, when completed, will consist of nave, aisles, chancel, organ-chamber, vestry, and bell turret; but at present contracts for the nave only have been accepted, the committee hoping to be able to build the chancel and vestry immediately on the completion of the present contract. Messrs. John Brown & Co., who give the land, will also provide the bricks. The dressings will be of terra-cotta. The seating accommodation to be provided at the outset is for a congregation of 412. The flooring will be of wood blocks, and heat will be afforded by means of a low-pressure hot-water system. Mr. E. Isle Hubbard, Rotherham, is the architect; and Mr. W. H. Trehern, Parkgate, the contractor.

WESLEYAN METHODIST BUILDINGS, CHESTERFIELD.—The memorial stone of a new Wesleyan Mission Hall in Hollis-lane, Chesterfield, has just been laid. The new hall will be two stories in height, with six class-rooms underneath and assembly-room above, and will be built of red brick. The assembly-room will measure 50 ft. by 32 ft., and will seat 300 persons. The class-rooms will afford accommodation for 300 Sunday school scholars. The architect is Mr. J. Wills, of Derby, and the builder Mr. R. Peck, of Chesterfield.

METHODIST FREE CHURCH, PLYMOUTH.—This building, situate in Ebrington-street, has just been opened. The buildings comprise church and school-rooms. The church has a gallery all round, and will seat about seven hundred people. There are two vestries on the ground floor, and also a preacher's parlour. On the landing of the gallery staircase on the east side there is a vestry furnished and fitted for a ladies' room, and on the west side a class-room. Under the church there is a schoolroom, with six class-rooms and a library. The infant schoolroom is a separate building on the east of the church. The room above is to be used for the church parlour. On the western side of the building there is a cottage for the caretaker. The premises are heated throughout with hot water. Messrs. Tozer & Son were the builders, and Mr. H. J. Snell was the architect.

WESLEYAN CHURCH, WESTBOURNE, NEAR BOURNEMOUTH.—The memorial stones have just been laid of a Wesleyan church at Westbourne. The building will be in the early Perpendicular style, the materials used being brick with Bath stone dressings. It is to be divided into nave and side aisles, the nave being carried on an arcade of granite shafts, with Portland bases and caps. Provision will be made for the future erection of a gallery at one end of the church, and also for a tower at the south-west corner. The length of the church will be 59 ft. 4 in., and the chancel will be 22 ft. 10 in. beyond that. The height from floor to ceiling will be 32 ft. The width will be 46 ft. 10 in., and a church parlour will be added to the west of the chancel, while to the east will be erected the organ loft and choir vestry. There will be a large central window on the side fronting the Poole-road, with five lights. The roof will be tiled. To the north of the church is the school-room, which is now completed. The entrance is from the Landseer-road, and the width of the building is 22 ft. 6 in., and the length 40 ft. The architect is Mr. Robert Curwen, of London, and the contractors are Messrs. F. Hoare & Sons. The total cost is estimated at about 4,800*l.*

CONGREGATIONAL CHURCH, WREXHAM. — The foundation stones have just been laid of this building. The plans for the church were prepared by Messrs. Ingall & Son, the contract being secured by Messrs. Lewis Brothers, of Wrexham. The new schools were completed in January, and the congregation occupy that building pending the completion of the church. The whole of the buildings occupy a site at the junction of Salisbury and Percy roads, the schoolroom being 46 ft. 6 in. by 30 ft., with accommodation for 300, and the church, 56 ft. 3 in. by 38 ft., with transepts that give a total width of 56 ft., and seating accommodation for 600. The organ and pulpit will be placed in an apse at the end of the church, where are also placed the minister's and deacons' vestries, and a kitchen. The church will be heated with low pressure hot-water pipes. The building will be faced with Ruabon brick and stone dressings. It will be surmounted by a tower and spire, rising to a height of 80 ft.

CONGREGATIONAL CHURCH, HULL. — The new Congregational Church for Hull is to take the place of the old Fish-street Church. The church is cruciform, having a nave 52 ft. in length by 28 ft. in width, with north and south transepts 18 ft. 6 in. and 15 ft. 6 in. in depth respectively, and 23 ft. 6 in. in width. There are north and south aisles separated from the nave by an arcade having polished granite shafts with moulded stone caps and bases, the arches being in moulded bricks. The transepts are lighted with mullioned windows having cusped heads and moulded transomes, the aisle windows being similar, but without transomes. There is a clearstory with mullioned and traceried windows on either side of the nave. The principal entrance is at the west, where a vestibule, 28 ft. by 10 ft., is entered by two doors. Communication is made from the vestibule on the south with the stone staircase to the gallery, which also has a separate entrance, while northwards of the vestibule is a retiring room. The church will seat 585 persons on the ground floor and 68 in the gallery. The choir is provided for at the east end of the nave behind the pulpit, and in the rear of the church is the minister's vestry, church parlour, 22 ft. by 18 ft., and other offices. At the north-west angle of the nave is a tower, square at its base, but working out into an octagon. The whole of the principal frontages are faced with red stock bricks, the dressings to windows and doors being in Ancaster stone. The contract for the whole of the work is about 4,800*l.* The works are being carried out under the direction of the architect, Mr. W. H. Bingley, Hull.

ENLARGEMENT OF CONGREGATIONAL CHURCH, RUGBY.—Foundation-stones have just been laid for the enlargement of the Congregational Church at Rugby. Two new transepts, 23 ft. wide, will be provided, and the chancel will extend 8 ft. beyond. In the transept nearest the school fifty extra seats are to be placed, whilst the transept opposite will contain sittings for twenty-four, in addition to the organ. In the centre of the church eighty sittings will be placed, and nearer the rostrum the choir will be located. The transepts will be lighted by two traceried windows of tinted cathedral glass. There are to be four new entrances—two of these leading into the transepts by porches, and the remainder forming joint approaches to the church and vestries. At the rear a minister's vestry, 14 ft. by 11 ft., is to be erected, and also an occasional vestry, 12 ft. by 11 ft. In addition to minor alterations, the school porch has been set back, and by shifting the boundary wall extra width has been given for approach to the school. The contract of Messrs. Linnell & Son to carry out the additions for 1,289*l.* has been accepted. The architect is Mr. J. T. Franklin.

SCHOOL, ABERDEEN.—A new school is about to be erected by the Aberdeen School Board at the corner of Albion-street and Hanover-street. Facing Albion-street the building will be 116 ft. long, and to Hanover-street, on the east side, it will have a frontage of 70 ft. The school is to be three stories high; and it will be built of grey granite. Four entrance doors are provided for—two in the Albion-street front and two directly opposite. From each of the doors a passage extends across the building to the corresponding door on the other side; then a corridor runs from end to end along the middle of the building on each floor. On each side of this corridor the class-rooms are arranged. The main portion of the space on the Albion-street front on the ground floor is to be devoted to a gymnasium, 50 ft. by 25 ft. 6 in. There is room at the end of the gymnasium for one class-room, and on the other side of the central corridor three more class-rooms are to be provided. On each of the two upper floors six class-rooms are to be constructed, three on each side of the corridor. On the ground floor the class-room accommodation is for infants, the older pupils going up to the higher rooms. Cloak-rooms and staircases are to be constructed in projecting wings at the two ends of the building. The new school will accommodate 1,000 pupils. Mr. Arthur Clyne is architect for the new building.

WESLEYAN SUNDAY SCHOOLS, BAILGATE, LINCOLN.—The foundation stones of the new Sunday Schools to be attached to the Bailgate Wesleyan Chapel were laid on the 11th inst. The new schools have been designed by Mr. W. Mortimer, and are to be erected by Messrs. Halkes Bros., contractors. They are situated at the rear of the chapel. The main schoolroom will be 55 ft. by 33 ft. 2 in., while there will be five classrooms on the north side, and an infants' schoolroom on the front. There will also be a corresponding classroom and library, with conveniences. On the upper floor will be two classrooms, and the basement will contain the heating apparatus, a boiler-house, and a kitchen. The basement will be connected with the ground floor by means of a lift.

EXTENSION OF BURGH SCHOOL, BURNTISLAND, FIFESHIRE.—At the monthly meeting of the Burntisland School Board, on the 5th inst., it was decided to make an extension of the school buildings. The plans of Mr. Little, architect, Kirkaldy, which provide for the addition of a wing to the north of the existing buildings, were approved.

HOSPITAL EXTENSION, LEAMINGTON.—The foundation-stone of the new wing of the Warneford Hospital, Leamington, was laid on the 5th inst. The new wing is part of the original design for the extension of the hospital, and was adopted by Leamington as the local scheme for the commemoration of the Queen's Diamond Jubilee. The new structure, for which Messrs. Young & Hall, London, are the architects, will be built on the pavilion principle. The new wing will accommodate thirty-two additional patients. When the new wards are completed the entire capacity of the hospital will be increased to 125 beds.

POLICE BUILDINGS, PETERHEAD.—Plans of the new police buildings for Peterhead have been prepared by Messrs. W. Henderson & Son, architects, Aberdeen. The front elevation, of about 45 ft., facing Merchant-street, will be of red and light-coloured granite. In Tolbooth Wynd there will be an elevation, extending over 90 ft., of hammer-blocked red granite. The main entrance is from Merchant-street, and it leads into the administrative department, where there are a charge room, waiting room, inspector's room, with a passage to the cells, cloak room, and lavatory accommodation. Behind these are the muster room and quarters for four unmarried constables, comprising sleeping rooms for each and a kitchen for general use. There are seven cells, one of which is double. On the first and second floors there are quarters for six married constables.

BUSINESS PREMISES, PERTH.—New offices for the General Accident Assurance Corporation are to be erected in Tay-street and High-street, Perth. The designs are by Mr. George P. K. Young, Perth.

PROPOSED ENLARGEMENT OF BRIDGEND WORKHOUSE.—At a meeting of the Bridgend and Cowbridge Guardians recently, the Workhouse Alterations Committee recommended that the sketch plans prepared by the architect (Mr. P. J. Thomas, Bridgend) be presented to the Board. It is proposed to acquire an additional acre of freehold land adjoining the present building for about 1,000*l.*, and to erect thereon a new infirmary, with accommodation for from 80 to 100 beds, as well as to carry out alterations in the present building. The total cost is estimated at from 15,000*l.* to 20,000*l.*

BUSINESS PREMISES, SWANSEA.—New premises have just been erected at Swansea for Messrs. B. Evans & Co. The firm bought up and pulled down the shops at the corners of Goat-street and Caer-street, and they have erected a frontage there in consonance with the style of the rest of their building, and in doing so they have given up to the Corporation about 100 ft. The premises were erected by Messrs. Lloyd Bros., from the designs of Mr. Rowlands (Messrs. J. P. Jones & Rowlands).

TOWN HALL, LYNTON, DEVONSHIRE. — The foundation stone has just been laid of Lynton Town Hall. The new building will cost about 14,000*l.* The architect is Mr. Macdonald.

BATHS, SHEFFIELD.—The new Corporation baths for ladies in Glossop-road have been erected on the site of the old bath and the Bath Saloon. In their place the Corporation have erected, from the designs and under the superintendence of the City Surveyor (Mr. C. F. Wike), a swimming bath for the exclusive use of ladies, with thirty-five dressing-boxes, ten slipper baths, and two foot baths. The swimming bath is 25 ft. wide and 75 ft. long, with a varying depth of from 3 ft. 6 in. to 5 ft. 6 in. The building is of brick with stone facings. The bath is lined with glazed white bricks, and the divisions between the slipper baths are of slate instead of wood. At the Glossop-road end of the building there will be a large window of stained glass. The contractor for the building is Mr. George Webster, whose contract amounts to about 5,200*l.* The heating and engineering work has been carried out by Messrs. Bradford & Company.

HOTEL PREMISES, NEWCASTLE.—Alterations are being carried out at the County Hotel, Neville-street, Newcastle. The improvements include the erection of a new stone front, extending it to double its present length—in all 130 ft. This will bring the main entrance to the hotel in the middle instead of, as originally, at the west end of the building. Six shops will occupy the ground floor of the hotel, facing Neville-street, three on each side of the main entrance, and cellarage will be connected with each. A seventh shop will occupy the Grainger-street part of the altered premises. All above the shops will be reserved to the hotel, and will consist principally of bedrooms, making a total of 140 for the entire building. The extreme west end of the new premises and the Grainger-street west corner will be surmounted by cupolas. The height from the ground floor to the roof is 82 ft., and to the top of the cupolas 95 ft. The cost of the alterations is estimated at 30,000*l.* Mr. Walter Scott is the contractor, Mr. Smellie the clerk of works, and Mr. M. H. Graham the architect.

CONVALESCENT HOME, LEEDS.—A workpeoples' Convalescent Home has just been opened at Horsforth, Leeds. The building consisted originally of two semi-detached villas. The principal entrance is on the south side, and a porch gives access to an entrance hall. To the left of the entrance is the matron's room, and adjacent are the kitchen, scullery, and other domestic conveniences. A passage to the left gives access to the dining-room, capable of seating from thirty to forty persons. To the right of the entrance are the board-room and the men's day-room, with door opening out into a verandah.

Adjoining the day-room is the smoking-room, and at the end of the hall is an exit with a porch leading out to the north side of the building. On the first floor are ten bedrooms for patients, matron, and servants. On the second floor are six bedrooms. There is a total accommodation for thirty-two persons, exclusive of the household. In the basement are the larder, storage-room, wash-kitchen, and ironing-room. All the rooms and corridors are heated with hot water, and there are also open fireplaces in most of the rooms. The building has been remodelled and altered from plans prepared by Mr. Walter A. Hobson, architect.

NEW PAVILION AT THE OVAL.—A new pavilion has been erected at the Oval. All the old buildings have been taken down with the exception of the large dining-hall, which is enlarged by nearly one-half its present area, and, with the new professionals' dressing and club rooms, forms the west wing of the new pavilion. The central portions contain, on the basement floor, lavatories for the members, and under the club-room and bar storage premises. On the ground floor is the members' club-room, 60 ft. by 26 ft. overlooking the cricket ground, with a bar in the rear about 50 ft. by 18 ft., and at the west end of the club-room are the members' private and writing rooms. On the east side of the club-room are the secretary's offices. A corridor at each end of the club-room traverses the building and opens on to the stand in front of the club-room. The committee-room and members' dressing-rooms, with lavatory, bathrooms, and necessary conveniences, are situated on the first floor. In the east wing a ladies' cloak-room is provided adjoining the entrance to the side stands, and on the first floor the Press-room, with telegraph-room, lavatories, spare room, &c., en suite. Adjoining the Press-room is the scorers' box, and below the telegraph-room is a printing office. The roofs of the central portion of the pavilion and over both wings are constructed with fireproof flooring, and upon these roofs are stepped "stands." Externally the building is faced with red bricks relieved with Bath stone dressings, and the roofs to stands and over the committee and dressing rooms are covered with Broseley tiles. Electric lighting has been arranged for all the principal rooms, lavatories, and corridors, supplemented by gas. The architects were Messrs. T. Muirhead & W. Wallis Baldwin.

ELECTRIC LIGHT WORKS, HIGH WYCOMBE.—The foundation-stone has just been laid of the buildings now in course of erection as an electric lighting station at High Wycombe. A site for the electric-light station was found in a meadow adjoining Lily's-walk. The necessary buildings have been designed by Messrs. Moxham & Son, of Wycombe, and include a boiler-house, engine-house, accumulator-house, and various offices. The contract for their erection has been entrusted to Mr. Henry Flint, whose tender amounted to 2,383*l.* The fitting of the works with an electric lighting plant has been placed in the hands of Edmundson's Electricity Corporation, Limited. The fitting of the plant is under the supervision of Mr. J. C. Wigham, representing Messrs. Edmundson, and of the resident engineer, Mr. Fippard.

THE "HEN AND CHICKENS" HOTEL AND CAFE, BIRMINGHAM.—This building is in course of erection in New-street, between the Grammar School and Lloyds Bank. The building, which, with its equipment, has cost 20,000*l.*, rises 60 ft. above the street level, while the floor of the sub-basement is 25 ft. below. The site has a frontage of 48 ft., and a depth of 50 ft., with an extension of 15 ft. under the school premises, adjoining, for the sub-basement. The building rises to a height of five stories and a mansard. A feature of the hotel is an octagonal corner tower, which rises from the level of the first floor on a splayed pier of polished Aberdeen granite, is broken by a series of oriel windows, and is surmounted by a short spire. The upper portion of the façade towards the street is broken by a central series of projecting oriel windows, terminating with a decorative gable in front of the high-pitched roof. On the first three floors, towards both New-street and the boys' school, are bay windows. The first story is faced with Aberdeen granite. The portion on the right of the principal entrance has a shop-window frontage, and that on the left has been taken as an extension of the bank premises. An archway and vestibule give access to the hotel and to the café, the latter being in the basement. The hotel proper, entered through a lounge behind the vestibule, commences on the first floor, where, facing New-street, are the commercial-room and the drawing-room, partitioned by screens of glass and polished mahogany. Behind is the coffee-room, while farther back are a smoke-room, serving-room, and lavatories, a centrally-situated office completing the suite on this floor. The second, third, and fourth floors contain the visitors' bedrooms, forty-eight in all, and each containing a fire-place. In the mansard are sitting-rooms and dormitories for the staff. The building is so far detached from its surroundings that from the first floor upwards three and a half sides have light and air space, while further lighting is afforded by an oblong wellhole, extending from the third floor to the roof. In the rear, towards the bank, is the main staircase, which is of granite, with a wrought-iron balustrade. In the well is a passenger-lift traversing the nine stories of the building, and available for conveying visitors' cycles to a store provided for them in the basement. The artificial lighting throughout the hotel is by electricity, from the mains of the Electric Supply Company. Messrs. James Moffatt & Sons are the builders, and Mr. J. A. Chatwin is the architect.

THE "GRAND" THEATRE, DOVER.—A company has been formed for building a theatre, together with five shops and residences, on a freehold site covering 17,365 ft. superficial, with a frontage of 151 ft. to Maison Dieu-road, which has been purchased for 2,750*l.* from the Corporation. Mr. Harry Percival, late Surveyor of Theatres to the London County Council, has prepared the plans and designs for a theatre (in the Italian Renaissance style, with red brick and stone dressings), having seat accommodation for about 1,750 persons, an auditorium 55ft. 6in. wide, and a stage 38 ft. deep by 55 ft. 6 in. wide, with an opening of 27 ft. square, and a height to the gridiron of 56 ft. The nine dressing-rooms are to be in a separate building outside the theatre's main walls, and the pit and stalls will be sunk 10 ft. below the road level. The cost of the buildings, including the houses and shops, is estimated at 21,250*l.*, exclusively of the cost of the land. The theatre is to have a main frontage of 32 ft., and a private road, 10 ft. wide, on each side. The contractor is Mr. W. J. Adcock, of Dover.

CATHEDRAL MOSQUE FOR LIVERPOOL.—A movement is on foot, says the *Liverpool Post*, to erect a cathedral mosque in true Saracenic style in Brougham-terrace, West Derby-road. The residences Nos. 11 and 12, Brougham-terrace were purchased on behalf of the Liverpool Moslems a few years ago, and on their site it is proposed to erect a cathedral mosque and a continental khan for the convenience of visitors from the Far East. Mr. J. H. M'Govern, of Liverpool, has made the designs and prepared the plans. The khan will have a frontage to Brougham-terrace, and at the rear of the hostel will be a terrace, courtyard, and central dome tomb. Facing Baker-street, and at the corner of Marsden-street, the cathedral mosque will be erected at an estimated cost of 6,000*l.* Fully 1,500 worshippers will find accommodation in the mosque. Owing to the position of the site, special treatment has been given to it by the architect, so that the Mihrab, or niche for the Koran, which really constitutes a mosque, shall indicate the Kiblah, or direction of Mecca. The mimbar (pulpit) and dikka (tribune) will follow the same direction. Above the aisles will be the galleries, exclusively used by ladies. There will be two minarets in Baker-street. The north one will form the main entrance, and from the south one the azan, or call to prayer, will be given. A third minaret will be situate in Marsden-street. The flat iron and concrete roof of the building is to be crowned by a Saracenic dome, which will differ from the Italian dome in its geometrical form. In the basement of the building will be the printing works, whence will be issued Islamic literature for distribution in this country.

## SANITARY AND ENGINEERING NEWS.

SWANSEA NEW WATER WORKS.—At the Swansea Guildhall recently, Colonel Boulnois, R.E., Local Government Board Inspector, held an inquiry respecting an application from the Corporation for permission to borrow another 100,000*l.* on account of its new water works scheme at Cray. Mr. Jevons (deputy town clerk) explained that the Corporation were authorised by Act of Parliament to construct a water reservoir at Cray, to make a tunnel, and construct a line of pipes. At the present time they had simply carried out the laying of the pipes. The expenditure authorised by the Act was 270,000*l.*, which might be increased afterwards with the sanction of the Local Government Board. At the present time 97,406*l.* had been spent on the laying of the pipes and the acquisition of the land, &c., which left 172,942*l.* in hand. The lowest tender for the completion of the work of constructing the reservoir was 255,747*l.*, and consequently they would require another 100,000*l.* Mr. Hill (consulting engineer) said he was quite sure the dam would be absolutely safe.

PONTEFRACT AND THE SEPTIC SYSTEM.—At a meeting of the Pontefract Town Council recently, the Mayor (Alderman Maud) gave the result of the visit of a deputation to Exeter to inspect the septic system of sewage treatment. The Council decided to adopt the system, at a cost of about 300*l.* The existing sewage works will be used, and all that will be needed will be the acquisition of septic tanks.

THE TREATMENT OF SEWAGE.—In the House of Commons a few days ago, Lord Balcarres asked the President of the Local Government Board whether he could now state the *personnel* of and the terms of reference to the Royal Commission on the disposal and treatment of sewage. Mr. Chaplin said the commissioners appointed were the Earl of Iddesleigh (chairman), Sir Richard Thorne Thorne, K.C.B., Professor Michael Foster, Professor Wm. Ramsay, Major-General Constantine Phipps Carey, Dr. James Burn Russell, Colonel Harding, Mr. William Killick, and Mr. Charles Cotton. The commissioners were appointed to inquire (1) what method or methods of treating and disposing of sewage (including any liquid from any factory or manufacturing process) might properly be adopted consistently with due regard to the requirements of the existing law, for the protection of public health, and for the economical and efficient discharge of the duties of local authorities; and if more than one method might be so adopted, by what rules in relation to the nature and volume of the sewage, or the population to be served, or other varying circumstances or requirements, should the particular method of treatment and disposal to be adopted be determined; and (2) to make any recommendations which might be deemed desirable with reference to the treatment and disposal of sewage.

MORECAMBE SEWERAGE.—At a special meeting of the Morecambe Urban District Council, held on the 11th inst., the details of the sewerage scheme prepared by Mr. H. Bertram Nichols, C.E., of Birmingham, were approved, and it was resolved that application be made to the Local Government Board for sanction to borrow 60,000*l.* to carry out the works.

MANCHESTER SEWAGE DIFFICULTIES.—On the 12th inst. the Manchester County Stipendiary dismissed an application by the Corporation for an extension of time within which to complete their sewage scheme. As a result, the Corporation will be proceeded against for polluting the ship canal.

SEWAGE DISPOSAL, COSSALL, NOTTINGHAM.—The Rural District Council of Basford having applied to the Local Government Board for sanction to borrow 2,300*l.* for purposes of sewerage and sewage disposal for the parish of Cossall, an inquiry was conducted on the 11th inst. in the National School, Cossall, on behalf of the Department, by Colonel W. Langton Coke, M.Inst.C.E.. There were present representing Basford Mr. S. Maylan (Surveyor and Inspector), Mr. H. Walker (Engineer of Works), Mr. Dutton Walker (Assistant Engineer), and others.

SEWERAGE SCHEME, ALDEBURGH. — A Local Government Board Inquiry has just been held at Aldeburgh respecting an application of the Town Council of the Borough to borrow 11,000*l.* for the purpose of sewerage disposal. The engineer is Mr. Mansergh, and evidence was given on his behalf by Mr. G. R. Strachan, C.E.

NEW BUTE DOCK, CARDIFF.—The contract for the construction of the new Bute Dock at Cardiff has just been let to Messrs. Topham, Jones, & Railton, of Westminster. The work will be executed at schedule prices, and the total is estimated to amount to 550,000*l.* This contract refers to the dock only, the construction of the pier (not the low-water passenger pier, but a spur at the entrance of the dock) and the dredging of the channel being the subject of separate tenders.

## STAINED GLASS AND DECORATION.

MEMORIAL WINDOW, TRINITY U.P. CHURCH, POLLOKSHIELDS. — A memorial window has been placed in Trinity U.P. Church, Pollokshields. The window is one of four lights, with tracery at top, being divided by a transom, and shows eight panels, each panel representing different events in the life of our Saviour. The glass stainers who have executed the work are Messrs. Walker & Fyfe; the cartoons are from the studio of Mr. Harrington Mann. Sketches for the window were drawn out by both parties in competition, and by instruction of committee combined in execution. The work has been executed under the supervision of Mr. W. G. Rowan, the architect of the church.—*Glasgow Herald.*

CARVED OAK WORK, CLONFERT CATHEDRAL.—Some carved oak work has been recently erected in the chancel of Clonfert Cathedral, consisting of clergy and choir stalls and Bishop's throne. The clergy stalls are for the Canons of the Cathedral. In addition, there are seats for the Dean and Archdeacon. The work has been carried out by the contractors, Messrs. Sharp & Emery, of Dublin, in accordance with the designs of Mr. J. F. Fuller, F.S.A., the architect.

## FOREIGN.

FRANCE.—M. Bernier, architect of the new Opera Comique, has been elected member of the Académie des Beaux-Arts in place of the late M. Ginain. M. Stanislas-Louis-Bernier, who was born in Paris, is a pupil of M. Daumet, and of the Ecole des Beaux-Arts. He gained the prix de Rome in 1872, and the medal in the Salon of 1878, as well as those of the exhibitions of 1878 and 1889. He was made Chevalier of the Legion of Honour in 1885.——A new Salle is being arranged at the Louvre, in which will be placed some beautiful works of art and furniture of the eighteenth century, which have come from the Châteaux of Saint Cloud, Meudon, and Compiègne. There is also some old Sèvres, and a fine ceiling by Boucher.——The municipal administration has just opened to the public the new historical library of Paris, which has been transferred from the Hôtel Carnavalet to the Hôtel Le Pelletier de Saint Fargeau, Rue Sevigné. —— The extending of the line of the Orleans railway to the Quai d'Orsay has necessitated the displacement of a certain number of sewers on the left bank, and in the course of the work several objects of interest have been discovered which the "Commission de Vieux Paris" has taken possession of for the Carnavalet Museum. Amongst the number may be mentioned a stone, carved with figures and armorial bearings, belonging to the old church of Saint André des Arcs, some remains of columns

some Roman and mediæval pottery, and, lastly, an old canon or "bombarde," dating from the fourteenth century."——On Saturday last the Margolin-Scheffer gallery was inaugurated in the museum at Rouen. It contains a large collection of drawings left by Madame Margolin, daughter of Ary Scheffer. Amongst the drawings are two works by Eugène Delacroix, some drawings by Pils, Flandrin, Troyon, Fromentin, Théodore Rousseau, Ingres, Cabanel, Benouville, besides some water-colours by Barye and Tony Johannot.——At the suggestion of M. Gosset, architect, a subscription has just been opened at Reims to erect in the cathedral a commemorative stele in honour of Jean d'Orbais, architect, and of the Archbishop Albéric de Humbert, founder of this great architectural monument.——M. Boulin has been elected President for 1898 of the Société des Architectes of the Department of the Loire.——The death is announced, at the age of eighty-eight, of the French engraver, Alphonse Masson, a pupil of Decamp and Ingres. He exhibited for the first time in 1835. He had engraved the principal works of Français, Millet, Rousseau, Chas. Jacques, Ribot, Delacroix, and other eminent artists.——We hear also with regret of the death, of the age of fifty-one, of Felix Buhot, a painter and etcher of high talent, with an unusual knowledge of the technique of etching. A pupil of Pils, he had abandoned painting to devote himself entirely to original etchings, in which he made a great success, and impressions of his plates were in much request among amateurs in England and America. The illustrations which he executed for some of the romances of Barbet d'Aurévilly and of Alphonse Daudet were among his best work. He had also executed a large series of views of London.*——The Minister of Commerce has just definitely approved of the plans for the façades of the different palaces which are to be erected in the Champ de Mars and on the Esplanade des Invalides. The buildings will be commenced next month.——The Musée de Longchamp at Marseilles has just received some additions; a fine drawing, by Pierre Puget, of the "Rade de Marseille," also a portrait by Hyacinth Rigaud, and twelve drawings by Elie Delaunay.——The Société Française d'Archéologie, founded at Caen in 1834, will open its sixty-fifth session in July this year at Bourges, under the Presidency of M. de Marsy.——M. Le Deschault, architect des bâtiments civils, has just submitted his designs to the Minister of Fine Arts, for replacing the wooden monuments covering the remains of Voltaire and Rousseau in the Panthéon by monuments of a more severe character, made of yellow Sienna marble.——The new acqueduct which is to convey the waters of the Loing and Lunain to Paris has just been commenced at Fontainebleau.——The work of improving the port at Nice is to be begun very soon.——M Eugène Pierron has just been elected "architecte voyer-en-chef" of the city of Paris, in place of M. Alphonse Legros, retired.

AUSTRIA.—The monument to the poet Raimund will shortly be uncovered: it has been decided by the Committee, under the presidency of Councillor Nikolaus Dumba, to hold the inaugural ceremony on June 1—the birthday of the subject of the memorial. The monument, which has been executed by Herr Franz Vogl, will stand before the portico of the German Volkstheater at Vienna. It represents Raimund seated in meditation with an allegorical figure behind him symbolising his muse imparting inspiration to him.——The Spinnerin am Kreuz is the handsomest wayside monument in Austria. It is over 60 ft. high, and dates from the palmy days of the Gothic period. It is in the form of a tower on a triangular plan. Six niches contain representations of the scenes of the Passion in relief. Between these stand six figures of saints, standing on beautiful pedestals. Farther up are the portrait busts and arms of the builders. Above this again are statues of the twelve Apostles, winged angels with scrolls, and figures of Christ and the Virgin. The restoration of this work was undertaken twelve years ago, and cost more than 18,000 florins. It has, however, been disfigured by mean shops clustered round it, which the people of Neustadt, where it stands, have long been anxious to pull down, but the owner put so prohibitive a price upon them that the work has been impossible. With admirable public spirit, however, the Bank of Neustadt has come forward and bought up the shops for 38,000 florins, and it is now to be hoped that this work of art will at last be properly seen.——The long-projected enlargement of the city warehouses of Vienna will be carried out in the course of the present year. The new elevators, petroleum reservoirs, and the enlargement of the wine-cellars will cost 2,000,000 florins.——The directors of the General Hospital at Vienna have, with the sanction of the Lower Austrian Government, erected an annexe for providing their own building with light after the system invented by Dr. Strache, lecturer at the Technical High School of Vienna. The annexe is erected on a square of 120 metres behind the pathological and anatomical laboratory, and is planned to supply a daily demand for 200,000 cubic metres of water-gas. Water-gas costs about half the price of ordinary gas, and gives a much brighter light, and is also to be recommended on sanitary grounds.——Consent has been obtained to the building of a temporary theatre on the Kahlenberge, Vienna.——Herr Raimund Jeblinger has been entrusted with the task of preparing plans for a new church at Amstetter.——Herr Moll, an artist of Vienna, has communicated with the Town Council of Vienna, offering to carry out, without personal remuneration, a design for a monumental fountain, left by the late Victor Tilgner, and now in Herr Moll's possession. The offer has been accepted, and the fountain is to be erected on a site selected on the Stefansplatze. The estimated cost will be about 7,400 florins.——A monument for the soldiers who fell in the neighbourhood of Kratzau, Bohemia, in 1866, is to be erected in the town, from the designs of Herr Emanuel Gerhardt, sculptor and professor at the technical school in Reichenberg. The monument will be nearly 5 metres high, and is to consist of a pedestal on which an obelisk stands, in front of which is a figure bearing the arms of Germany and Austria. At her feet is a war fury, and above her the imperial crown of Austria. In the middle is a figure emblematical of peace.——The plans for new public baths at Simmering have not been passed owing to their costliness (about 56,000 florins). The Municipal building office has allowed four weeks in which to prepare a cheaper plan. The use of a smoke-conversion apparatus is to be taken into consideration.——An extensive meadow-land has been added to that portion of Graz at the foot of the Ruckerlberg which has already been laid out in villas. The first villa on the new ground, which is being erected by Messrs. Stärk & Weixl for Herr Gernot, is approaching completion.——An asylum for 200 incurables of both sexes is to be erected at Laibach as a Jubilee memorial, at a cost of 500,000 florins. Herr Adolf Rosmann is to be the architect.——Herr Schmalz, the owner of the Einöd mineral bath, has been granted powers to bring a light and power electric installation into the town of Friesach. A central station is to be built, beside the works acquired by him from the Alpine Mountain Company. Herr Mayrgründtner is to be the engineer; Messrs. Ackermann & Madile, of Klagenfurt, will be entrusted with the hydraulic, and Messrs. Ganz & Co. with the electric works. ——An electric station for the town of Kufstein is also to be built; Messrs. Schuckert & Co., of Vienna, will be entrusted with the contract. The work is to be completed in five months.

* The foregoing portion of these notes was held over from last week.

## *MISCELLANEOUS.*

ACCRINGTON MASTER BUILDERS' ASSOCIATION.—At the Derby Hotel recently, the annual dinner and meeting of members of the Accrington Master Builders' Association was held. Mr. H. Ramsbottom presided. At the subsequent proceedings, Mr. Wm. Ormerod, the Secretary, read the report, which stated that the trade of Accrington and district was in a very good condition, and the relations existing between masters and men were satisfactory. There was no dispute at present as to wages in the district, the only thing approaching it being a letter from the operative joiners relating to imported joinery and its fixture, which letter would be laid before the master joiners. There were thirty-two subscribing and ten honorary members of the Association, and it had now become amalgamated with the Manchester and Liverpool and District Association, and the united organisation would in the future be known as the Lancashire and Cheshire Building Trades Employers' Federation. Particulars of disputes between masters and men as to wages, &c., would in future, after being communicated to the local Secretary, be forwarded to the general Secretary to deal with. The report was adopted, and the Chairman afterwards gave an address.

FISHERIES EXHIBITION, ABERDEEN.—Mr. John Rust, City Architect, has prepared sketch-plans of the Exhibition buildings, to cover nine acres, and to cost 9,000*l*. The plans are recommended to the Executive for approval. It is proposed to hold the Exhibition next year on the Queen's Links, the total area to be enclosed being twenty acres.

FEDERATION OF BUILDING TRADE EMPLOYERS.—The first general meeting of the Northern Counties Federation of Building Trade Employers was held at the Empress Hotel, Sunderland, recently. On the motion of Mr. Ranken (Sunderland), seconded by Mr. Robertson (South Shields), Mr. Walter Lowry (Newcastle-on-Tyne) was elected President of the Federation. Mr. D. Ranken was elected Vice-President, and Mr. J. M. White Hon. Treasurer. Mr. Wilton A. Rycroft, chartered accountant, of Newcastle, was appointed Secretary.

NATIONAL ASSOCIATION OF SLATE MERCHANTS AND SLATERS.—The half-yearly meeting of the members of the National Association of Slate Merchants and Slaters was held at Furness Abbey recently. The President of the Association, Mr. W. R. Thompson, of Dewsbury, presided, and about 100 delegates were present. The President, in his opening address, said the question of working rules was becoming of more importance than the wage question. They saw operatives endeavouring to impose working rules which were generally considered intolerable, and that Association might in future be asked to consider how such demands should be met. The Compensation for Accidents Bill, he said, was far-reaching, and entirely in favour of the workmen. So largely were the risks increased that insurance companies had raised the rates of premium to from 20s. to 37s. 6d. per 100*l*. of wages paid. He advised the members to protect themselves by insurance, and to recoup themselves for this outlay by putting ½d. per hour on all labour. The hon. secretary (Mr. J. Townsley, Hull) read his report, which was accepted as satisfactory. He explained that the Central Board was dealing with the trade disturbances at Huddersfield, Barnsley, and South Shields. Papers were read by Mr. Eames, Bangor; Mr. F. W. Spink, Hull; Mr. Starkey, Leicester; and Mr. S. Atkinson, Leeds.

BORDER BUILDERS AND WORKMEN'S COMPENSATION.—A meeting of the Border builders was held in the Good Templar Hall, Galashiels, recently, to consider a proposal to form a company for the district to make provision for the increased responsibility of employers connected with the building trade by the Workmen's Compensation Act. Mr. Adam Herbertson, Galashiels, presided, and explained that it was proposed to form a company with a capital of 1,000*l*. in 1,000 shares of 1*l*. each share, to carry with it a guarantee of 10*l*., such guarantee to be called up, if necessary, for meeting claims for which the premium income and reserve and issued capital might be insufficient. He (Mr. Herbertson) had been in communication with the Ocean Accident and Guarantee Association (Limited), of London, who quoted rates for builders at 22s. 6d. per 100*l*. of wages paid, and for some of the other branches of the trade the rates were as low as 15s. That was for joiners. For saw millers the rates ranged from 25s. to 45s. If they were to avail themselves of these rates, however, they would require to form a branch of the Scottish Building Trades Federation, and he was opposed to having to do with more than one company. Mr. Ruthven, plumber, Galashiels, said he heard that the Equitable Company had quoted the rate at 15s., and Bailie Lindsay, Galashiels, said he knew of another London company likely to fix the premium at 17s. He moved that a company be formed for the district, and that the question of rates and other details be left to a future meeting, when more definite information as to what was being done by others might be before them. Mr. Tweedie, plumber, Galashiels, seconded, and this was agreed to. The meeting seemed favourable to reducing the guarantee of 10*l*. pertaining to each share to 5*l*., being confident that this would be ample to meet the requirements of the district, in which hitherto very few accidents have occurred.

SHEFFIELD MASTER BUILDERS' ASSOCIATION.—The annual dinner of the Sheffield Master Builders' Association was held at Berry's Restaurant, Moorhead, on the 12th inst. There were present, amongst others, Messrs. J. Longden, President, J. Biggin, vice-President, and J. Spink, hon. secretary. The loyal toasts were honoured, and then Mr. Coward submitted the toast of "The City and Trade of Sheffield," coupled with the name of Mr W. D. Forsdike, who replied.—Mr. Brumby proposed "The City Corporation," and Mr. Carr replied. The tramways, since they had been taken over by the Corporation, had been a continued success, and he hoped they would still be.—Mr. Biggin, in submitting "The Sheffield Master Builders' Association," spoke of the importance of the building trade, mentioning that it employed more men than any other industry, except agriculture. A million pounds were paid weekly in wages, and another million was spent in materials. The Sheffield Master Builders' Association had doubled its membership during the past year. The dispute with the masons was now settled, and in the rules a clause had been inserted constituting a conciliation board, to consist of six employers and six workmen to arrange any differences which might arise without resorting to strikes. —Mr. A. Forsdike responded.—Mr. Spink proposed "The Yorkshire Federation." He said that the Federation was the outcome of the formation of associations. They were forming a universal federation, which would have a very important bearing in regard to strikes. But first they were forming conciliation boards everywhere to prevent strikes.—Mr. J. Dawson replied.

SALES OF PROPERTY.—On the 25th inst., at Aberdeen, the Wardhouse (4,440 acres, with 2,580*l*. rental) and Kildrummie (about 7,870 acres, with 3,525*l*. rental), estates in Aberdeenshire; the latter lies in the district of Upper Donside, and contains the ruins of Kildrummie Castle. The castle, one of the largest in Scotland, was built by Gilbert, Bishop of Caithness, during the reign of Alexander II. (who died in 1249) on a cliff rising from the plain, or strath, near the river's left bank. The plan is quadrangular, the south side projecting to an angle at its middle, where is the entrance gateway. Lofty curtain walls, having six round towers at the angles and gateway, surround the enceinte, the Snow Tower at the north-west angle being 53 ft. in diameter, with walls 10 ft. 6 in. thick. Against the north front, 200 ft. long, is the great hall, measuring 73 ft. by 41 ft., at the east side is the chapel, about 35 ft. by 20 ft., where, in its only remaining (east) wall, are three thirteenth century tall lancet windows. Messrs. D. McGibbon and T. Ross, in Vol. I. of their work upon the Castellated and Domestic Architecture of Scotland, direct attention to the unusual form of the north-east tower windows, as pointing, seemingly, to the English occupation for its origin, being the square-headed trefoil common in Edwar-

dian castles. Kildrummie was besieged in 1306 by Edward I., burnt from within, and captured, when Nigel Bruce, the king's brother, was made prisoner and taken to execution at Berwick. It was next held by the Earls of Mar, Lords of Garioch, and Isabel, Countess of Mar, in whose lifetime it was taken by Alexander Stewart, grandson of Robert II., whom she married and endowed with her titles and inheritance. James III. gave the castle to his favourite, Robert Cochrane, architect, after whose execution at Lauder Bridge it was granted to James III.'s son, Alexander, and in 1565 returned to John, fifth Lord Erskine, to whom Queen Mary restored the Earldom of Mar. Cromwell's men burnt the castle, and a new house erected by the Lords of Elphinstone met with the same fate in "the '45."——Pinnock's Charity, known as St. Thomas's Hospital, founded by Henry Pinnock (1624) and James Fry (1710) in favour of Milton and Gravesend parishes; the property consists of sixteen almshouses built in 1836, endowed with 5 acres of fresh and salt marshland in Gray's Thurrock, Essex.——The Crown lease of the New Oxford and Cambridge Club, No. 68, Pall Mall, held for seventy-nine years from July 5, 1873, and now let at 2,000*l.* per annum; being the premises built in 1873-4, from Mr. T. Dudley's designs, for the Junior Naval and Military Club, whereof the lease (the ground rent being 550*l.*) was sold on August 8, 1887, for 30,700*l.*, to Mr. Ashton Lever, who founded the Beaconsfield Club there.——"Ridler's" Hotel, Holborn, covering 6,110 ft. superficial, with a rental of 750*l.* for twenty-eight years unexpired, has lately been sold for 37,500*l.*; the purchasers are, we understand, the Prudential Assurance Company who, as we recently described, are acquiring property, including Furnival's Inn, between Holborn, Leather-lane, and Greville-street, for the extension of their premises, after Mr. A. Waterhouse's designs.

THE ANCIENT WATER SUPPLY OF HAMPTON COURT PALACE.—By order of the First Commissioner of Works, the lead pipes which used to convey the water supply for Hampton Court Palace from Coombe Springs, Kingston Hill, have quite recently been taken up. This supply was first obtained by Cardinal Wolsey and it was discontinued only about thirty years ago in consequence of the pollution of the water through the growth of population on Kingston Hill. Notwithstanding their great age, the leaden pipes were in a fine state of preservation. Some of the pipes are as long as 200 ft. without a joint. The present water supply of the palace is obtained from the river Colne, formerly known as the Cardinal's River, the intake being at Hampton, whence it is pumped, after filtration, to the palace. —*Morning Advertiser.*

THE COURT OF COMMON COUNCIL.—At a meeting of the Court of Common Council, on the 12th inst., the report of the Streets Committee relative to the inquiry in respect of contracts was discussed. The report contained allegations regarding the contractors for engineers and smiths' work—Messrs. J. F. Clarke & Sons—and certain officials of the Public Health Department, and were to the effect that the four inspectors of pavements, and other subordinate officials, were in the habit of receiving, periodically, gratuities from the contractors, and that the vouchers signed by the inspectors contained entries as to time which had not been expended on the work, and that in respect of some of the vouchers, no corresponding work was done at all. The information was voluntarily supplied to the City Solicitor by two discharged clerks of the contractors. The inspectors emphatically denied having received any gratuities whatever, but the contractors, who at first also denied the statement, eventually admitted that they had made various payments to officials of the late Commission of Sewers for many years past. During the years 1896 and 1897 periodical payments have been made to the four inspectors of pavements amounting to from 60*l.* to 70*l.* each, and smaller sums to minor officials. Throughout the inquiry the officers had persisted in a most emphatic denial of the charge, but the committee were not satisfied with their denials, and they further considered that the loose and unbusinesslike manner in which the inspectors had kept their books, and the method in which the work was checked, constituted gross and reckless neglect of duty, which could not be too seriously dealt with. The committee recommended the dismissal of the four inspectors, and a fifth official, and the stopping of the pension of another person. They also recommended that no further orders should be given, or payments made, to Messrs. Clarke, and that they (the committee) should be permitted to continue their inquiries, with a view to the institution of such proceedings as the circumstances might appear to justify. Mr. Benjamin Turner, the Chairman of the Committee, moved the adoption of the report. Dr. Cross asked how could such a condition of things have occurred. Those men had lost their situations doubtless for very good reasons, but were they only the scapegoats of a system of laxity of discipline? Mr. A. A. Wood said one of the officials recommended to be dismissed asserted his innocence, and said he had not had an opportunity given him of proving it. Consequently he had instructed his solicitors to bring a suit against the contractors for defamation of character. He had been in the service of the Corporation for eighteen years, and never had a single complaint made against him. Mr. Lile thought the Committee had not gone far enough, and he said that, out of justice to the contractors and the men, evidence should be taken on oath before a jury. The Corporation owed the contractors a certain sum of money, and the advice was that they should not pay it until the contractors went to a court of law to recover it from them. To wait for that, he considered, would be a great mistake, for probably the contractors could well afford to lose the money, and need not take proceedings. After some further discussion, the report of the Committee was carried.

ORANSAY PRIORY.—At a recent meeting of the Glasgow Ecclesiological Society a paper on "Oransay and its Priory" was read by Mr. Campbell Douglas. By quotations from the writings of Adamnan, who was the ninth successor of St. Columba at Iona, from Bede's History, and the Irish records of Tighernac, and the records of the monasteries of Innisfallen and Buellan, he showed how we got the correct dates regarding St. Columba reaching Iona from two to three years after leaving Ireland in A.D. 563. An examination of what data is available leads one undoubtedly to believe that St. Columba founded the Celtic Church in Oransay, it being shown how the island Hymba, frequently mentioned by Adamnan in connection with St. Columba, and the place names in Colonsay, clearly point to the identity of the islands; and it follows that this small island may fairly be considered to be the place in Scotland where Christianity was first established. After showing that for many following centuries the religious history of the island is veiled in impenetrable mist till we begin to catch sight of the buildings of the fourteenth century whose remains have made the island so famous, and describing the old building "Teampull a Ghlinne," or "Temple of the Glen," which is traditionally connected with St. Columba, and describing its features and orientation and its possible uses, he thought it pointed to the probability of there having been ecclesiastical buildings at Oransay of an earlier date than those whose ruins now attract attention. After noticing the remains of the old "Clach an Tearmaid," or "Stone of Protection," which was a cross of sanctuary in the middle of the strand connecting Colonsay and Oronsay, whose base stones still remain with the mortar adhering to them, he went on to consider the buildings whose ruins now exist. John of Fordun in his "Scotch History" tells how he visited these islands in 1380, and that there was a monastery of black canons which had been founded by St. Columba, and that these black canons came from Holyrood as its superior. Mr. Douglas then went on to show how the Romish Holyrood Abbey or Church of the Holy Cross came to have sovereignty over the Celtic Oransay. It happened, he thought, in this way. In the Cartolary of Holyrood we read that in 1160 Fergus, the Prince of Galloway, in order to atone for his murderous sins, fled to Holyrood, and there assumed the canonical habit, and gave to Holyrood the "Vill of Dunroden." Holyrood thus came to have authority over an immense number of churches in the South and West, many of which are named, and in this way, as Mr. Petrie says in his preface to the Cartolary, "it is probable that the more ancient of the cells and dependencies of Holyrood in the Hebrides were at first the property of the Abbey of Iona, and that they changed hands with the Galloway possessions, although we have no record of their acquisition." He then summarised all the evidence for the probability, or otherwise, of John of Islay, Lord of the Isles, being the actual founder of the Oransay buildings, and admitted that, although there is no proof, there is from various circumstances which he mentioned a probability that John of Islay was the founder.

APPOINTMENT OF SANITARY INSPECTORS.—The Local Government Board has sanctioned the appointment of the following persons as sanitary inspectors in the undermentioned districts:—Messrs. J. T. Baxter and H. H. May, in Battersea; Mr. G. W. McQuinn, in Holborn.

A NEW COMPANY.—A company has been formed, with a share capital of 200,000*l.*, divided into 10,000 5 per cent. cumulative preference shares of 10*l.* each and 10,000 ordinary shares of 10*l.* each, for the purpose of acquiring, as a going concern, the business of J. Tylor & Sons, Limited, established over a century, and carried on at 2, Newgate-street, London; Belle Isle, King's Cross, London; and Pitt-street, Sydney, New South Wales, as hydraulic and sanitary engineers, and brass and iron founders, &c. The company has agencies in India, South Africa, Japan, South America, Spain, and Italy, and is on the list of contractors to the following Government departments:—War Office, Royal Engineers, Admiralty, India Office, and the Crown Agents for the Colonies. Messrs. W. H. Tylor, W. B. H. Drayson, and Philip Bright, who were directors of the old company, and who have long been actively engaged in the business, will act in conjunction with Mr. J. G. Mair Rumley, M.Inst.C.E., as directors of the new company, which will be conducted on the same lines and with the same staff (the principal members of which are shareholders), as the old company.

COUNCIL BUILDINGS, BRISTOL.—Bristol Town Council has decided to spend 2,500*l.* on a temporary chamber for the accommodation of its members at their meetings.

PRESERVATION OF THE PARTHENON.—Mr. F. C. Penrose, who recently arrived in Athens at the invitation of the Government, attended before the Council of Ministers and gave evidence regarding the condition of the Parthenon, and advised that certain works should be undertaken. Mr. Penrose expressed the conviction that the monument may yet be preserved for several centuries, thanks to the works of consolidation already carried out and to be continued according to his suggestions.

ABERDEEN ARCHITECTURE.—A correspondent in Aberdeen writes to us to say that the building given with the title Union Bank of Scotland, by Burn, in our last week's plates, is not the one to which that description applies, which is on the opposite side of Castle-street. The building with the quadrant porch shown in the view is the North of Scotland Bank, by the late A. Simpson. The names of the two buildings had been accidentally misplaced in our notes.

## *CAPITAL AND LABOUR.*

BRICKLAYERS' LOCK-OUT IN THE STOCKPORT DISTRICT.—Owing to a dispute between the master builders and bricklayers the building trade in Stockport and district is practically at a standstill.

WAGES IN THE NEWCASTLE BUILDING TRADE.—The members of the Joiners', Mill Sawyers', and Wood-cutting Machinists' Societies connected with the house building trade in the Newcastle district have, by ballot, decided to accept the halfpenny per hour advance offered by the Newcastle, Gateshead, and Tyne District Master Builders' Association and the South Shields Builders' Association. The advance will take place from June 1 next. The original application was for a penny, bringing the wages up to 10d. per hour.

THE BUILDING TRADE, ROCHESTER AND CHATHAM.—The threatened strike in the building trades in the district of Rochester, Chatham, and Gillingham has been averted, the employers having agreed to increase the pay of the bricklayers a penny per hour, and the carpenters and labourers a halfpenny per hour. The plasterers' demand has not yet been complied with, as their notices have not expired.

CARPENTERS' WAGES, CHELTENHAM.—Some time since a dispute arose in Cheltenham between carpenters and their employers as to the rate of wages to be paid, and the case was eventually submitted to arbitration. The men applied for an increase from 7d. to 7½d. per hour, on the grounds that stonemasons and plumbers received 7¾d. and 7½d. respectively, that wages had been raised in other towns, and that there was a considerable demand for labour just now in Cheltenham. Against this it is pointed out that the masons lose time in bad weather, that plumbing is unhealthy, that the rate of wages in Gloucester, Bath, Torquay, and other similar towns is 7d., while in winter months Cheltenham hours are shorter. The work done by small master men at less than the union rate was also urged. The case was submitted to the Rev. G. L. Gardner, vicar of All Saints, whose award was that for the present the increase ought not to be granted, and that the wages of the carpenters and joiners should remain at 7d. an hour.

THE YARMOUTH BUILDING TRADE.—The Yarmouth bricklayers, carpenters, and joiners recently asked for 7d. an hour, an increase of ½d. With regard to overtime, they required that the first two hours should be treated as time and a quarter; the next two, time and a half; and any time after ten as double time. As to apprentices, they asked that the number be limited to two for each master. The employers have conceded the additional halfpenny an hour. They have agreed to pay 1d. per hour extra for the first two hours overtime, and the men's terms for the rest. The demand as to apprentices was waived. The labourers claimed 4½d. per hour, an increase of ½d., and a new code of working rules similar to those of the bricklayers, carpenters, and joiners. The employers conceded the 4½d. The question of rules stands over for six months, after which it will be fully considered.

JOINERS' STRIKE AT BANGOR.—The joiners' strike at Bangor came to an end on the 10th inst., when the men resumed work after a fortnight's strike. Concessions have been made on both sides. The men asked for 6½d. per hour during the summer and 7d. during the winter, but have now accepted 6¾d per hour all the year round.

STRIKE OF CARPENTERS AND JOINERS, READING.—A strike of carpenters and joiners commenced at Reading recently. Some time ago the members of the Reading Branch of the Amalgamated Society of Carpenters and Joiners demanded among other things an extra 1s. a day beyond their ordinary wages and expenses for country work within a ten mile radius of Reading, ½d. an hour—from 7½d. to 8d.—rise in wages generally, and the abolition of overtime. As the employers could not accede to these demands the men, to the number of about 300, left work. It is said that the builders are quite prepared to concede the advance of ½d. an hour in wages, but they are strenuously opposed to the abolition of overtime, and not inclined to give way on the question of the extra 1s. for country work.

EDINBURGH MASONS AND THE NINE-HOURS' DAY.—A mass meeting of operative masons of Edinburgh

and Leith was held on the 5th inst. to reconsider the resolution passed at the meeting held recently with reference to the hours of labour. It was then agreed by 432 to 395 to revert to the fifty-one hours' week—nine hours each day except Saturday, when they should work six hours. On the 5th inst. it was proposed that the minutes of that meeting be confirmed. An amendment was moved to the effect that that part of the minute referring to the hours be rescinded. After considerable discussion, a vote by ballot was taken. On the vote being counted, it was intimated that 368 were in favour of the nine-hours' day and 353 for the eight-hours' day. The minute was therefore declared confirmed. Subsequently a letter was read from the employers in reply to one in which the operatives' secretary intimated the result of the last meeting. It expressed gratification that the men had agreed to go back to the fifty-one-hours' week, intimated that the employers would not press for a reduction of wages from 9½d. to 9d. per hour, but stated that car fares would only be paid beyond the new municipal boundary instead of the old. The latter point raised a new discussion, some holding that they should stand to the old boundary as already agreed to. The majority of the members left the hall, however, and the chairman had to declare the meeting adjourned to settle this question.

NORTHAMPTON PLASTERERS' AND THEIR WAGES.—The dispute which has for some time existed between the masters in the building trade and the plasterers has, it is stated, arrived at a mutual settlement, the masters having offered to increase the wages by the addition of ½d. per hour, which is half the amount appealed for. It has also been agreed to alter one of the rules to read as follows: "That the men be allowed to have one apprentice to two men and two apprentices to four men."

SWANSEA MASONS' STRIKE.—Meetings in connexion with the Swansea masons' strike were held on Friday and Saturday afternoons last week, but both proved futile. The men's committee declined to go back to work on the old terms, and also decided to recommend the men not to agree to a compromise in the shape of ½d. per hour advance, or to accept Cardiff terms, as Cardiff is a free town for stone. A mass meeting held on Saturday decided to reject the masters' proposals.

THE CARPENTERS' STRIKE, WESTON-SUPER-MARE.—The master builders having withdrawn their demand with respect to the alteration of the working rules of the Amalgamated Society of Carpenters and Joiners, and having signed the rules as submitted, the men have resumed work.

## *LEGAL.*

### THE WESTMINSTER BUILDING DISASTER.

At the Coroner's Court, Horseferry-road, on Thursday last week, Mr. John Troutbeck, the Westminster Coroner, resumed his inquiry (with Mr. John Slater as assessor), into the deaths of William Clifford Morse, Joseph Henry Parker, Charles Weatherley, Ernest George Lillywhite, Hugh John Bray, George Bridge Hillings, and Henry Clements, who were killed through the collapse of a building in Orchard-street, Victoria-street, Westminster, on the 21st. ult. Mr. Blenkinsopp, one of her Majesty's Inspectors of Factories, appeared for the Home Office; Mr. A. C. Kent for Mr. W. Rickard, the chief contractor of the works; Mr. A. Thompson for the General Labourers' Amalgamated Union; Mr. G. S. Edwards for the roof contractor, Mr. S. Murrell; Mr. Hugh Fraser for Mr. Drury, the District Surveyor; Mr. A. A. Hudson for Messrs. Drew-Bear, Perks & Co., and Bank's Fireproof Construction Syndicate; while Mr. T. Blashill, Superintending Architect to the London County Council, and Mr. Seager Berry, appeared for that body. Mr. Horace Avory now appeared to watch the interests of Mr. Pawley, the architect, and Mr. Young appeared for Mrs. Leeds.

James John Andrews, a foreman carpenter and joiner (recalled), said he believed he made the bed of concrete 5 ft. in the foundations, according to the plans now before the Court. The ground work was made of ballast over the London clay in the ordinary way. The footings for the pier were seven courses of brickwork in extent, and 4 ft. 1½ in. wide at the bottom. According to the terms of the Building Act, footings should be twice the thickness of the wall. He believed the footings were put in for a thicker wall.

Mr. Rickard (recalled and cross-examined by Mr. Young) produced an agreement entered into between him and Mrs. Leeds on November 12.—Mr. Avory: Mrs. Leeds had the freehold, and appointed Mr. Rickard to build, and it was his venture; but in November he sold his interest in the building to Mrs. Leeds for 1,000*l.*, and agreed to finish the building at prime cost.—The Coroner: Can you explain how the condemned bricks came to be brought from another building and used here?—Mr. Young: I am afraid we shall have to get it from Mr. Pawley.—The Coroner: Yes; but was there any difference in price?—The Witness: No; all the bricks were two guineas a thousand, and were all one quality. Bricks were high in price last autumn, but 42s. per 1,000 was a fair price for bricks ordered a considerable time before.—Mr. Young: All the bricks are still on the building.—The Coroner: I have not said they were not, but we have it that the witness or some one said the men were to make the best of them.—The Witness: I never said so.—The Coroner: But who condemned them? Mr. Pawley.—The Coroner: But we have been told that some of them were used in the building. Was that so?—The Witness: It is possible. The bricks were condemned by Mr. Pawley, the architect, at another job. Mr. Pawley told witness that those bricks were rather soft, and ought not to be used for the bottom part of the building. The best of the bricks might have been used for the inside walls.—Mr. Avory: When Mr. Pawley condemned these bricks at the other job, did you not lead him to understand that they would be ground up for mortar? Quite so, or most of them. I do not think they were all bad.—Mr. Avory: But all those he condemned you gave him to understand would be ground up for mortar? Yes. The witness, in reply to further questions, said Mrs. Leeds was the widow of a builder by whom witness had for many years been employed as building contractor. Mr. Pawley acted merely as architect, and witness paid his fees.

Mr. C. W. Courtney, stonemason, of Fulham, said that he supplied the templets used at Abbey-mansions. He was very seldom at the job. He was represented by the witness Collins, who was his responsible man. The five templets were 3 ft. 2 in. by 1 ft. 7 in., and 4 in. in thickness. He supplied them as ordered.

Mr. Tom Drew-Bear was next called, and stated that his firm supplied some of the girders. They were of various lengths, according to the order, and he suggested a scheme as to the best means of placing and fixing them, but his suggestions were not adopted. The girders were delivered as required, but the witness had nothing to do with the fixing of them.

Mr. Samuel Murrell, engineer, Victoria-street, said that he had a contract for the iron and concrete. He connected the roof, but did not make it. He hoisted the main girder and fixed the skylights, taking instructions, in the first place from Dixey, the carpenter for Simpson. When the roof was erected he started on the concrete. He never saw any specifications concerning the concrete, and received no instructions on the subject. He knew there must be specifications, but was never told about them. He had employed as many as twenty-three men on the concreting, the usual number being seventeen. On the Thursday after Easter, April 14, he received instructions from Mr. Andrews to alter three skylights. By that time the whole of the concreting was completed, and the witness refused to alter them until he was told to do so by Mr. Simpson. Mr. Andrews then came up to the roof together with Dixey, the carpenter, and Parker. There was some discussion as to who had made the mistake in putting in the skylights, but it ended by Andrews saying that no matter whose fault it was, it had to be altered; eventually some of the concrete was cut away but none of the concrete that ran alongside the pier was interfered with; only that on the north and south of the centre skylight. As the cutting went on the joists were redrilled and bolted up. The concrete on the south side, which was last put in, was quite set and hard. When the girders had been rebolted, he had some cement and breeze hoisted to the roof. By Saturday, April 16, the work had been done, and the alterations effected. He did not see the roof more than once during the following week, and he believed that none of his men went up there. On the day of the accident he was at the St. James's-court, and none of his men were at work on the roof. He had lunch with Simpson, whose last words to him on parting were "Don't let any of your men strike that centring. But get on with the seventh floor joists." A little later he heard of the calamity. The centring had been put up by witness's men, under Parker. It was made of new material. He got on the roof at six o'clock, and found the centring on the roof of the adjoining block, it having been struck. There were several survivors of the accident, who would explain what happened. As to Mr. Beckey's evidence of the alleged improper mixing of the concrete, the material would speak for itself. By the Coroner: Excepting the concrete round the skylight, in his opinion, the concrete had not set at the time of the accident. It required fourteen or fifteen days in which to set, sometimes three weeks. He also supplied the machinery and the steel joists for a portion of the building. He had no distinct knowledge of where his joists were put, but he supplied only four. By Mr. Thompson: No doubt his men did strike the centring. To Mr. Gardiner (solicitor for the relatives of one of the deceased men): If the centring were removed, he thought it would cause the concrete to fall. He did not think that was the sole cause of the accident. A winch had been left close to the staircase, and he had been informed that a "snatch" had been fixed to the pier, which had shot out through a weight being raised by the winch. One man could exert seven tons on the pier with the assistance of the snatch block, and any pier, however strong, would succumb to that pressure.

Joseph Smith, a labourer in the employment of the previous witness, deposed that a month before the accident he drilled six holes in the girders under the skylight.

John Hammond, who described himself as a "skilled labourer," said that on the day of the occurrence Parker (deceased) told him and five other men, four of whom were dead, to strike the whole of the centring. They began at two o'clock, after dinner. The concrete was very hard, and just before the collapse he remarked that it sounded like a drum. He was certain the concrete did not go first. He was on his knees on the coping, and before he could turn round the whole roof had collapsed without any previous warning. He considered the concrete was quite fit for striking. There were three poles lashed across the centre skylight, and tackle attached to them. He did not think it was being used while they were striking the centring. He felt no vibration. To the Coroner: He could not account for the collapse. Concrete had set well, and been fit for striking in eight days. He had "bounced his crowbar" on the concrete, when he told his mates it sounded like a drum. Four of the men killed were on the roof with the witness, and Parker, the foreman, was on the scaffold underneath looking to see how the concrete looked after the boards were removed.

The inquiry was then adjourned till Monday, when Mr. Horace Avory said he wished to make a statement as regarded the position of Mrs. Leeds in this case and that of Mr. Pawley. He had already stated that Mrs. Leeds was the freeholder, but on examination of the documents he found that Mrs. Leeds obtained the lease from the Greycoat Hospital with the option of purchase, and subsequently she acquired the freehold. She granted the building agreement to Mr. Rickard, and then became the trustee of the building. Then she purchased back from Mr. Rickard his agreement for 1,000*l.*, or, in other words, he was to complete the building for the 1,000*l.*, and the Admiralty were to take it over on completion. The Coroner: Then we are to really conclude that Mrs. Leeds was the trustee in the affair? Mr. Avory: Yes, according to documents that will be put in. The Coroner: But, Mr. Avory, if what you say is correct, then Mrs. Leeds has really nothing further to do in this matter? Mr. Avory: This is what I wish to be understood; and I take the responsibility of the matter. The Coroner: Then we will dismiss her from the case.

John Hammond (recalled) said that he was positive there were no cracks in the concrete at the time they were knocking away the centring of the concrete. He would still adhere to his evidence on the last occasion—that the building collapsed and not first the concrete. He was sure the concrete did not give way first.—By Mr. Kent: He heard some creaking just before the accident, and thought it was the poles of the scaffold, and, for the moment, thought some one was moving them, but instantly the whole building collapsed.

John Peckham, a carpenter, said that he was employed by Messrs. James Smith & Son, of Norwood Junction, who had the contract for the carpentering. He had been on the job two days when the accident occurred, and at the actual moment of the disaster he was working on the roof sorting some material for the frames of the skylights. He noticed just before the accident that there was a great strain on the block which had been placed across the skylight, evidently put there for hoisting. He could not say who was using it, but he had heard a squeaking noise from it as though whatever was being raised was too great a strain. The three poles on which the block was working would hold about a ton, he thought; certainly not seven tons. When the collapse occurred, he could not actually say whether or not anything was being hoisted, but he distinctly heard the sound of two or three cracks as if on the north wall. He thought the cracks were in the breeze concrete, but the whole place went at once.—The Coroner: You have heard the evidence of the last witness; do you agree in substance with him?—The Witness: Mainly, except as regards the north light (skylight). The cement round it was soft.—Cross-examined by Mr. Avory: It was his opinion that the striking of the centring round the north light was the cause of the accident.—Do you know why it was soft?—Because it had not had time to set.—Further cross-examined, the witness said he had heard a sound of falling scaffold boards, but he could not say they were the centring boards. Mr. Avory then put in a signed statement made by the witness, in which he had said on May 4 that he heard the sound of centring boards being knocked about and falling just before the roof collapsed.

Thomas Coppings, also a carpenter and joiner, said he was working with the last witness at the time of the accident, by the middle light on the roof. He heard the last witness shout out, "Get off; the building's going down," and he then saw the roof easing in as if the concrete was collapsing, and he consequently clambered on the parapet with Peckham. On looking round he saw the roof go. Just before the collapse he had heard a repetition of rumbling sounds as if something was falling underneath; he had noticed that the concrete round the north light was very soft, though he could not remember whether the centring had been knocked away. He had noticed that some one was hoisting with a three-sheet-block at the middle light right up to the time of the accident.—The Coroner: I suppose these men who were hoisting are not all killed, and that we shall have further evidence on this point?—Mr. Avory: It is a most

important point, but at present we have been unable to find out what this hoisting was. The Coroner (to the witness): Have you ever suggested that this hoisting was the cause of the accident?—The Witness: The creaking led me to believe so.—Have you any real reason for suggesting it?—No, barring the creaking.—Mr. Avory: Do you believe the knocking of the centring had any cause in the collapse?—The Witness: Yes.—Why?—Because it did not appear set.—The Coroner: Did you speak to the foreman about knocking the centring away?—The Witness: No.

Mr. Murrell, the contractor for the roof, recalled, said that Mr. Simpson, the assistant architect, said to him, "Don't you know that your men were hoisting iron at the time? Smith's men say that a noise was coming from the block." He could not say his winch was being used, but he thought it was, and that the "snatch" was fastened to the pier. That was what made him say that one man could exert seven tons on the pier. It was merely a theory, he had no evidence on the point. By Mr. Avory: A block would squeak if it wanted oiling.

Leonard Skinner, a labourer in the service of Banks' Fireproof Construction Syndicate, was called to prove that the binding girders were bolted to the carriage girders. There was no truth in the assertion that they were tied with ropes, and that he cut them before putting in the concrete. The ordinary bolting was employed.

Charles Smith, one of the injured labourers, said he was working on the scaffold underneath the roof near the north skylight. He knew of nothing happening until the whole of the roof fell in, there being no previous warning. As to the concrete, it was quite hard. They had been removing the centring from two o'clock until 3.40, when the accident happened. He had heard no creaking or rumbling just prior to the collapse. He did not see any concrete being improperly mixed.—By Mr. Avory: About thirty or forty boards had been struck when the roof fell in. At that moment he was drawing a bolt.

Thomas Stewart, the foreman plumber, said he was fixing some stack pipes on the roof when he saw two men undoing the centring bolts. Then there was the sound of the crumbling of a matchbox—it was no louder than that, so to speak—and the roof fell in. The roof sank in in the shape of the letter V over an area of from 20 ft. to 23 ft. The concrete must have twisted the girders. He did not know what caused him to come to that conclusion. By Mr. Avory: In his opinion the concrete was not fit for striking. After the accident he looked among the débris and found some pieces of concrete from the roof. It was, in his opinion, not properly set, and did not contain sufficient cement. He showed some of the concrete that remained on the roof to Mr. Pawley and Mr. Simpson. It was of the same consistency as that found in the basement, that was to say, it was green and contained moisture. For that reason he said it was not fit for striking. It was not light enough in colour when it was dry, and it could be broken with the hand. Properly made concrete could not be broken in that way. The roof seemed to give way just over where the men were striking the centring, and he heard the repeated "bangs" of each floor being struck by the falling mass. By Mr. Gardiner: He could not swear that the girders did not fall before the roof. The object of the girders was to support the weight of the concrete. On the day after the accident he told Mr. Pawley what a "narrow squeak" he had had, and it was then that he showed him the sample of what he considered to be bad concrete. It was about half dry. The centring was not struck at the spot where he picked up the sample.—By Mr. Griffith: He did not say all the concrete was green; he did not see it all. He had been there all that day. He was speaking of the condition of the concrete when he saw it in the débris. He had walked across the roof two or three minutes before the collapse, and he then noticed nothing the matter with it.—Questioned by Mr. Avory, the witness said that on the morning after the accident a stone step was found depending from the hoisting tackle.—By the Coroner: There were no scaffold poles across the centre skylight for hoisting purposes.—The Coroner: That is a distinct contradiction of what other witnesses have sworn to.—The Witness adhered to his statement, adding that the jib referred to was erected after the collapse. Before the accident the opening of the centre skylight was occupied by the scaffold upon which Bray was working.—The Coroner: Two carpenters have sworn most positively that the hoist was there.

Henry Alfred Penfold, a scaffolder, said he was on the sixth floor striking the scaffolding when he saw the hoist go to the front, and everything fell from the roof on to the sixth floor and from there to the basement. He heard the sound of the roof falling on the scaffold after the hoist had come down. He believed the poles forming the jib were erected by the contractors for the stone work.—To Mr. Gardiner: He thought the girders fell and carried the hoist with them. He believed all the floors, with the exception of the first and the seventh, were concreted. The girders which fell had been resting on the pier which supported the roof. If the pier "buckled" it would have brought down the roof.

The inquiry was adjourned until Tuesday, when Henry Penfold, a labourer, was recalled and cross-examined. He said he saw a template on each floor of the pier. Under the concrete was a scaffold, and if the concrete fell it would bear down the scaffold a distance of 20 ft. before it could get to the sixth floor.

William Aspinall said he was working on the sixth floor, and when the accident occurred the first thing he saw was the pier wobble, gradually overbalance, and fall. The roof, being thus left unsupported, came in with the crash, and falling on the pier bore everything down with it. The hoist was being used by the stonemasons for raising the stones of the Victoria Stone Company for the staircases, and the loads were about two or three hundredweight. He would swear the hoist referred to had no connexion with the brick pier. He saw the pier topple as if going to fall on them; but the floors below suddenly collapsed, and the pier went down with them.

Henry George Gander, a scaffolder, stated that he was working on the sixth floor scaffold by the side of the staircase which was being fixed. He was facing the pier and working the tackle of the hoist, but when the accident occurred there was nothing on the tackle whatever, nor had there been for quite seven minutes. When he saw the dust it was round the pier, which seemed to buckle up by the level of the sixth floor.—What did you think caused the pier to buckle up?—Putting too great a weight upon it and not enough support.

Edward John Thorp, a bricklayer, was called. He said he had a contract with Mr. Rickard for the brickwork at 4*l.* a rod without scaffolding, and 6*l.* a rod with. That was for labour only. He did the whole of the brickwork of the south block. He worked from the plans (produced) for only a short time, after which he had others (also produced). From the latter he built up to the first-floor front, and then drawings were supplied. He had nothing to do with the laying out of the ground. He saw the plans, &c., at the office of the general foreman, from whom he received instructions. That would be Andrews. The building stopped from March, 1897, to the end of July of that year. From that date the building went on until it collapsed. He did not work on the brick pier himself. The wall was built first, the footings being put in for a 2 ft. 8 in. wall; but the wall was reduced from off the top of the footings to 18 in. When it was scaffold high (4 ft. 6 in.) there was an alteration, and the end of the wall was pulled down. The pier was five bricks by two and a half bricks, and went up to the level of the fifth floor, from whence he reduced the pier to 3 ft. 9 in. by 1 ft. 10 in. This went up to the roof. He altered it after consulting Mr. Andrews, who agreed with him that the pier would be stronger built that way. If he saw an alteration in the plans necessary he would mention it to Mr. Simpson, the assistant architect. Three girders ran from each floor to the pier. The 24 ft. girder was bedded on a template, which was 6 in. each way less than the size of the pier, and had a bearing of from 16 in. to 18 in. on the pier. On the part of the pier not covered by the principal templates was another to take a 10 in. binder, which rested on the flange of the girder. Six large templates were used. Where the bricks came from was not his business. Hard stock bricks were used and cement, not mortar. He did not know where the bricks came from, but no soft bricks were used in the construction of the pier. He had nothing to do with the pier after taking it up to the roof. It was not true that part of the pier was erected on a template. He thought Andrews' memory had failed him. On the day of the accident he was on the roof of the north block, and saw two carpenters running, after which the roof fell in—it caved in. He attributed the collapse to the fact that the concrete was not properly set, and that when the centring was removed the whole sheet of concrete between the two lacing joists, 23 ft. in length, caved against the pier, and that being the weakest point the accident was the result. He thought Murrell's men were not telling the truth.—By Mr. Avory: He went on the roof on April 18, when the concrete generally was loose or unset. He had seen the concrete only half an hour before the disaster, when he was surprised to see the men striking the centring. He thought the concrete fell towards the pier, otherwise the latter would have been standing now. Had the piers given way first he must have heard it. After the accident he examined pieces of concrete among the débris, and they were perfectly soft and unset.—By Mr. Gardiner: He judged the concrete by the tread of his feet and the colour, too. His feet did not make an impression on the concrete, which was "crumbly" on the top face. He did consider the striking of it was dangerous, and that the men's lives were in jeopardy. That was why he left the roof.—Pressed by the coroner, the witness said he might have been exaggerating when he said he considered that the men's lives were in jeopardy, but he did leave the roof because he thought it was dangerous.

Henry Sage, foreman scaffolder in the employment of the previous witness, said he noticed the building as it went up. At the time of the accident he was between the sixth and seventh floors, when he heard a crash overhead, followed by the falling of the pier. He had just passed the pier at that moment, and it was not moving then. Nothing struck the pier that he saw. Something was coming down before the pier moved.

At this stage the case was adjourned till Wednesday, when Peter White, labourer and scaffolder, employed on the building, deposed that he saw the roof give way and falling towards the pier, which wobbled and then fell. After the accident he broke the cement with his foot. It was not set. It was not coke breeze, but simply refuse from engine-houses.—The Coroner: You say it was refuse? Witness: Yes, I do. It was not coke breeze.—By Mr. Ellis Griffith: He saw the whole of the concrete fall. The crack in the concrete ran clean to the centre.

Mr. Edward Drury, District Surveyor, was called, and produced his notice for the inspection of the premises on March 20, 1896. Mr. Rickard called in company with Mr. Pawley. Witness examined the plans and wrote his opinion. On August 26 a question arose as to whether the building was to be used as a domestic or a public office building. Domestic buildings required a certain amount of open space, while public buildings were to some extent exempt from the section of the Building Act. The Orchard-street property did not comply with the Act, and he notified Mr. Pawley of the fact. He satisfied himself as to the thickness of the walls. He had asked to see the amended plans, and they were shown to him by Andrews. He found them correct, and that they conformed with the Act, and consequently passed them. He did not see any detailed plans. He had no powers with regard to the building of the pier. He had no power to report even to the County Council of any danger until the building had actually been completed. He found on another examination that the Abbey Mansions had exceeded the height allowed by the limit of the Act. The building had been carried to 93 ft., and 80 ft. was the height allowed. Each story had been increased in height. He at once wrote to Mr. Rickard and asked him what he intended to do about it. He received a letter from Mr. Rickard to the effect that the building was in the possession of her Majesty's Government, and was, therefore, under Section 202 of the Building Act, 1894, which exempted all Government buildings from the general provisions of the Act. He saw the building about a month previous to the collapse. The plans produced did not show the present height of the building. He had no control over the girders. Unless they carried a wall he had no power under the Building Act to compel any alteration until the girder had been put in position. He had control over the roof. The construction of the roof or of any roof above 60 ft. in height must be constructed of fireproof material. The front slope was not to be concreted; he had allowed them to put wood on the fireproof. He had never seen any designs of the roof, and would not pass a wood roof. His duties were clearly set out in Section 146 of the Building Act. He examined portions of the pier since the accident. It was built with stocks and cement, and was fairly well built. He did not notice any of the templates. Neither could he say there were many soft bricks used. He knew that some of the girders were bolted. Witness produced a piece of concrete taken on the afternoon of the disaster. It was very wet, and, of course, that would lessen its stability. He thought the concrete was properly mixed. He saw no concrete which would be broken by hand. If the girders had remained steady and in their place, he did not think the concrete could have fallen. He had made calculations with regard to the matter generally. He considered that the pier could carry six tons per foot super—about forty-five tons, but he was of opinion that it was carrying two good tons more than a safe load. There was a rule that a pier should not be more than twelve times its least thickness at the base in height. When a pier was increased to forty times its strength was reduced to one-third. A safe load in brickwork was very difficult to define, and probably no two persons would agree on the point. In calculating forty-five tons as a safe load for this pier he did not take into account the height of the pier, which was 3 ft. 9 in. by 1 ft. 10½ in., and 107 ft. high. Assuming that the pier was only twelve times the height of its least size at the base, and that it stood alone, forty-five tons would have been a safe load for it.—Mr. Avory: You will find that the building was made higher to please the Government.—Mr. Drury said that was the first he had heard of it.—Mr. Ashmead said the Commissioners were anxious to afford the Court every information in their power, and would adduce evidence on the point.—Continuing his evidence in chief, Mr. Drury said he had two theories as to the probable cause of the disaster. The first was that the centres were struck too soon and that the concrete fell in consequence and levered the pier over, but that theory had been demolished since he had been in court. He was now of opinion that the pier gave way, but he could not explain why he thought so. He considered that the pier broke because it was not thick enough. He heard the suggestion of a stanchion in court for the first time.

The inquiry was adjourned until Thursday.

## SCHOOL BOARD FOR LONDON *v.* DICKSEE.

THIS was an action heard at Westminster County Court before his Honour Judge Lumley Smith, on

May 5, and brought by the School Board for London against Mr. Bernard Dicksee, District Surveyor for East Newington, &c., for the recovery of certain fees paid under protest. In the early part of last year the School Board for London were enlarging the Chaucer Schools, Westcott-street, Southwark. The alterations involved the acquisition of the sites of the fifteen old buildings in Pardoner-street and Manciple-place. As these old buildings were situated within the prescribed distance of the centre of the road, the District Surveyor's certificate, under Sec. 13 (5), was necessary. The Board therefore submitted plans of the fifteen houses upon one sheet to the District Surveyor, and demanded that he should issue his certificate for the fifteen old buildings for one fee of two guineas. But the District Surveyor claimed fifteen fees of 2 guineas in respect of the fifteen old buildings to be certified, and as the Board refused to pay this, he declined to issue his certificates until such fees were paid, and until separate plans of each building were submitted for his certificate, except on the distinct understanding that if, to suit the Board's convenience, he certified the fifteen old buildings on one sheet, it was without prejudice to his right to charge a fee according to schedule in respect of each building. The Board therefore paid the fees under protest on April 5, 1897, and the District Surveyor issued his certificates.

Mr. Cunningham Glen, instructed by Mr. C. E. Mortimer, appeared for the School Board, and Mr. Horace Avory, instructed by Messrs. Hicklin, Washington, & Passmore, for the District Surveyor.

Mr. Glen argued that, as the buildings were surveyed at one time, only one fee of two guineas was payable to the District Surveyor, and that, even if the fifteen fees might be payable to him, he had waived his right by issuing his certificate of the fifteen houses upon one sheet. The Public Authorities Protection Act of 1893 was pleaded by defendant; this Act limits the time during which certain actions can be brought to six months. Mr. Glen argued that, as this action was for the recovery of money, the Act did not apply.

His Honour, without calling upon Mr. Avory, said that the plaintiff Board had made out no case; that the action was barred by the Public Authorities Protection Act; the payment of the money under protest did not affect the application of the Act; the third schedule of the Building Act fixed a fee of two guineas for certifying the plans of an old building. This did not mean more than one building. A fee of two guineas was payable in respect of each building the plans of which were certified.

Judgment for defendant with costs as between solicitor and client.

## MEETINGS.

FRIDAY, MAY 20.

*Architectural Association.*—Mr. A. T. Walmisley on "Foundations as Applied to London Buildings and Riverside Foundations." 7.30 p.m.

SATURDAY, MAY 21.

*Architectural Association.*—Seventh Spring Visit, to Grove Hospital, Tooting. 3.30 p.m.

*Northern Architectural Association.*—Visit to Sandyford Schools; the Grand Theatre, Heaton; Raby-street Schools, and the adjacent Presbyterian Church.

MONDAY, MAY 23.

*Carpenters' Hall, London Wall (Free Lectures on Carpentry and Joinery).*—Mr. John Slater, B.A., on "Timber Roofs, Tie Beam and Hammer Beam." 8 p.m.

*Society of Arts (Cantor Lectures).*—Professor Carus Wilson on "Electric Traction." IV. 8 p.m.

TUESDAY, MAY 24.

*Royal Victoria Hall, Waterloo Bridge-road.*—Professor Marshall Ward on "Wood." 8.30 p.m.

THURSDAY, MAY 26.

*Architectural Association.*—Annual Dinner, Holborn Restaurant. 7 p.m.

*Institute of Builders.*—Annual Dinner, The "Trocadero," Piccadilly-circus. 6.30 p.m.

*Society of Antiquaries.*—8 p.m.

*Institution of Electrical Engineers (The Society of Arts, John-street, Adelphi, W.C.).*—Professor Charles Carus Wilson on "The Design of Electric Railway Motors for Rapid Acceleration." 8 p.m.

## RECENT PATENTS:

### ABSTRACTS OF ACCEPTED SPECIFICATIONS.

*Open to opposition until June 27.*

[1897.] 10,546.—COUPLING JOINT FOR EARTHENWARE BASINS: *J. Stewart.*—A metal or other band, with a screw thread on its outer surface, to receive a binding ring or coupler, is formed on the basin's nozzle, which is corrugated or notched. The coupling ring has at one end an inside flange, the lead pipe is inserted and turned over in the ring, to form a flange, and a washer is inserted between the flange and the nozzle, the joint is completed by screwing the coupling ring on to the nozzle.

10,709.—SASH FASTENERS: *W. H. Wakefer.*—The device comprises a barrel attached to one sash having a bolt adapted to slide and turn therein, and provided with T or L shaped end to pass through a housing attached to the other sash and formed preferably in an elongated inverted U-shape, and either plain or serrated; when the end of the T-bolt is in a vertical position, and has passed through the housing, the window cannot be opened further than a distance equal to the bolt's amount of travel in that direction, and by a quarter-turn its two ends are made horizontal, and so its withdrawal is prevented.

11,385.—REGULATING FEED-TAPS FOR FLUSHING CISTERNS, &c.: *W. Terrey.*—The plug is hollow, with a large diameter, and is held in position in its seat in the usual manner; openings are made through its walls, opposite the bore, two being of the full size of the bore or water-way; the other openings are so arranged that turning the plug brings them opposite the exit bore alternately; the plug's top is marked with a pointer to register with "open" and "closed" on the edge around; a metallic cap screws on to the body and encloses the top of the plug and its shank, but a small hole is made through the top into a shallow recess (to hold the seal) through which passes a rectangular lug on the small shank of the plug's upper portion; the passage of certain amounts of water during given times can be regulated.

12,452.—SMOKE OR FOUL AIR MASKS: *R. Dowling.*—The mask consists of (*a*) a casing which has a transparent surface, and is fitted with padding so arranged as to prevent foul air or gases from coming into contact with the eyes, (*b*) a tube connected with a pump and carrying an antiseptic material for absorbing the fumes, and (*c*) a valve for the outlet of surplus or used air.

13,247.—WEIGHING MACHINE FOR USE IN CONJUNCTION WITH A CRANE OR HOIST, AND FOR WEIGHING THE LOADS WHILST RAISING THEM: *Eisenwerk (vormals Nagel & Kaemp) A. G.*—The claim is for a weighing machine inserted in the path of the chain of a crane adapted to be automatically moved into the operative position—after the load-lifting movement has entered upon a condition of inertia—by a cam mechanism operated from the crane or hoist whenever the load attains a predetermined height; the cam is actuated by the drum shaft to throw the weighing lever into and out of gear, and can be converted into a complete circular disc during the load's descent by means of a segment which during the forward stroke is arrested.

14,857.—BARBED OR ARMED FENCING OR RAILING: *J. Gare & Berry, Limited.*—The invention's object is to roll the flat metal bar or ribbon to such a section, and to punch such pieces out of it, that when it has been twisted a wire, having barbs or spikes projecting all around it, is produced; the bar or ribbon is rolled to wedge or taper section with or without a beading at the thick edge on one or both sides, the part from the thin edge to the beading (or a part of equal width when there is no beading) is formed into pyramidical barbs or spikes by punching trapezoidal pieces out of it at regular distances.

15,338.—WINDOW SASHES OR THE LIKE: *F. J. Shoesmith.*—The frame is constructed with the pocket coming out between the beads, and has a suitable metal plate and screw; each sash is divided at one side, the sash proper being normally secured to the divided portion by a small bolt, whilst the split or joint is covered at the back by a shaped strip of metal; the sashes slide in the usual manner, and can be opened inwardly by slipping the bolt that allows the sash to be swung out, when it can be lifted on to a supporting rod, the divided portion passing up out of the way, when the top sash can be operated in a similar fashion.

24,865.—NON-RETURN GAS VALVES: *A Kay.*—The valve's body or casing is preferably cylindrical and of cast-iron; the valve-seat is turned and faced in the casing, or may be made of a white metal seat inserted therein. The valve is hemispherical in shape and made, preferably, of pure block tin, aluminium, &c., with its lower edge turned to a bearing and ground to form a gas-tight contact with its seating; it is pivotted on to a vertical spindle set in guides within the casing above and below the seat and fitted with a stop to retain it in position.

[1898] 3,296.—TINNING AND SOLDERING ALUMINIUM: *C. V. Burton D.Sc.*—The soldering alloy consists of, say, one part of aluminium dissolved in twelve parts of melted tin (by weight); when melted on the seam or surface of the aluminium the alloy is gently rubbed thereon, with asbestos, or a loop of iron or brass wire; if the alloy has not run evenly, or if edges or surfaces, separately tinned, have to be soldered together, unalloyed tin is next applied.

4,179.—ROOF AND OTHER VENTILATORS: *R. Mackay, jun.*—For ready removal for repair, &c., of the side valves, the inventor fits the valve tray or frame in such a manner that the flaps or valves can be taken out of the box, which has grooves or ledges at its sides.

4,652.—BRICKMAKING MACHINES: *J. Sharpe.*—In this machine the feed-box and the damper or valve of the supply spout are operated automatically; it has also a mould box, with a movable mould cap and dies, whereby the bricks are fashioned rough on their large or connecting surfaces and smooth on their ends and faces.

5,909.—MACHINERY FOR GRANULATING, CRUSHING, AND SCREENING STONE, ORE, AND LIKE MATERIALS: *W. H. Baxter.*—The invention combines a revolving screen, which has an elevator arranged within a part of its internal periphery, with a pair of crushing or granulating rollers, provides means for driving the screen and elevator from the rollers, and effects proper lateral adjustment of the rollers for preventing end play. To prevent the ends of the rollers from taking a lateral movement by the wearing away of the sides of the framework, renewable pieces are dovetailed into the latter between the two rollers so that one piece is enough for each end thereof. The pieces extend below the centre of the roller shafts and project inwards beyond the face of the framework's sides.

### NEW APPLICATIONS.

*For week ending May 7.*

10,000, J. T. Cope, for Regulating the Temperature of Japanning and other Stoves. 10,011, Middleton & Ecroyd, Sifting or Screening Apparatus. 10,019, A. Griffiths, Workman's Time-checking and Recording Machines. 10,022, G. Daubenspeck, Carbons and Filaments for Electric Lamps. 10,023, B. Haigh, Acetylene Gas Machines for House Lighting. 10,030, J. Browne, Chimney or Ventilating Shaft Top. 10,032, W. Trewhella, a Lever Jack. 10,036, H. Goldenfarb, a Window-cleaning Guard. 10,042, M. Rochegude, a Hydraulic Motor. 10,043, F. Lux, and 10,435, C. T. Noulan, Water Meters. 10,046, G. Lilienthal, Fire-proof Floors. 10,055, Browning & O'Brien, Adding and Calculating Machines. 10,056, J. Saxl, Controlling Apparatus for Acetylene Generators. 10,067, E. A. Claremont, an Appliance for Use in Combination with Public or Private Baths. 10,080, King and others, "An Optical Device for Obtaining Parallel and Rectangular Determinations." 10,084, J. H. White, Draught Preventer. 10,085, E. A. Green, Drains, Sewers, and Pipes and Channel Bends for the same. 10,088, G. F. Newman, Fanlights and the like. 10,089, C. Adams-Randall, Electric Telephony. 10,095, Parsons-Smith and Baker, "Bell Answering." 10,098, J. Brocklehurst, Cooking Ranges and Fire Grates. 10,100, The Nitrogen Processing Company, Drying and Pulverising Apparatus. 10,103, R. S. Brown, Chain Mortising Machine. 10,110, C. Oliver, and 10,121, J. F. Wakelin, and 10,236, Sandy and others, and 10,523, I. H. Hegnar, Electric Arc Lamps. 10,114, C. Barnett, and 10,141, F. Vörös, Acetylene Gas. 10,120, Simpson & Morley, Securing Loose Stiles for Safety Sash Windows. 10,122, E. A. Huddleston, for Adjusting the Height and Inclination of Pictures, &c. 10,123, A. E. Bocquet, Gas Cocks and Valves. 10,131, United States Heater Company, Water-heaters for Buildings and the like. 10,147, H. T. Weld, Doors and Screens. 10,148, J. W. Deübner, Verified Record Time-recorders. 10,156, M. D. Prendergast. Wire Fences. 10,157, C. Schierholz, Purifying Water. 10,159, W. Kimberley, Instantaneous Grip Spanner. 10,175, H. Lumsdon, Pipe Wrenches. 10,184, E. West, Friezes for Wall Decorations. 10,195, S. H. Webb, Oil Lamps for Excavators and other purposes. 10,199, J. Trippett, Stamps for Crushing and Pulverising Ore, &c. 10,213, Brighton & Bate, Bending Pipes. 10,224, L. Stöger, a Roofing Tile. 10,227, C. W. Luther, Veneers. 10,237, E. E. F. Fagerström, Petroleum Motors. 10,241, J. Tweedale, Hooks for Cranes, Ropes, &c. 10,245, A. E. R. Bottone, Electric Cut-in and Cut-out. 10,248, C. Miles, Electrical Time Checking and Registering Apparatus. 10,251, Kinne & Gartner, Compressible Tubes. 10,253, W. Beer, Grain Silos and similar Structures. 10,258, Busill & Featherby, Artesian Well and other Pumping Apparatus. 10,260, J. J. Mann, for Humidifying the Air in a Room, &c. 10,263, T. Turnbull, Anti-corrosive Damp-resisting Paint. 10,269 70, C. P. Steinmetz, Alternating Current Induction Motors. 10,273, G. Beach, "the Wedge Compasses." 10,274, Rose and others, Fire Escapes. 10,276, W. King, Reversible Window Fittings. 10,291, C. Wirt, Rheostats for Electric Circuits. 10,314, Arno & Caramagna, Electric Motors. 10,316, G. P. Gross, Pathway Curbs and Culvert Covers. 10,328, E. van Bellinghen-Tomberg, for Securing Slates to Roofs. 10,335, G. F. Belling, Water and other Taps. 10,337, H. G. Lloyd, Draining Devices for Hydrants or other Conduits. 10,343, W. Lockwood, Pulley Blocks and Lifting Tackle. 10,352, E. J. Knight, a Magnetic Motor Engine. 10,359, Gollers, Door, Window, and other Hinges. 10,369, S. S. Rogers, Fixing Wood Blocks in Sewer, Manhole, and Inspection Covers, &c. 10,371, A. Wadsworth, Self-landing Hoists. 10,381, O. Crane, Flushing Water-closets. 10,387, F. Love, a Guard for Upright Cutting Machines. 10,389, G. Singer, Bolts. 10,394, A. Robertson, and 10,412, T. A. T. Rydberg, Door and other Locks. 10,402, H. B. Ives, Adjustable Fasteners for Window Beads. 10,416, Quick & Walker, Fire-grates and Stoves. 10,418, B. J. Fisher, Fastening Devices. 10,421, J. Gascoyne, for Securing Blind and other Cord Ropes and the like. 10,425, Bachert & O'Neil, for Impregnating Wood. 10,471, G. C. Purvis, Filtration of Sewage or Impure Waters. 10,477, Jaegers and others, and 10,483, Abbott & Bill, Electrical Switches. 10,486, Skellys, Automatical Raising and Lowering of Window Blinds, &c. 10,491, J. Noad, White Lead. 10,496, F. M. Staunton, a Maximum Electric Current Self-recording Instrument. 10,500, J. Hilsden, Ratchet Braces. 10,515, L. Epstein, Dust and Mud Collecting Vans. 10,521, H. A. Cutler, Indicating or Recording the Level of Water, &c. 10,524, J. H. Reynoldf, Window Sash Fasteners. 10,527, P. Wernicke, Depositing Colours for the Patterns of Cemen and other Slabs.

## SOME RECENT SALES OF PROPERTY:

### ESTATE EXCHANGE REPORT.

April 29.—By PROTHEROE & MORRIS.

| | |
|---|---|
| Leyton.—Church-rd., "Eltoe House and Church Farm," area 11 a. 1 r. 6 p., f. | £8,100 |
| Church-rd.—An enclosure of marsh land, 7 a. 2 r. 32 p., f. | 500 |
| Mile End.—62, Cephas-st., area over 2,500 ft., f. | 1,050 |

By RAMSEY & CO.

| | |
|---|---|
| Peckham.—28, Rye-lane, u.t 26½ yrs., g.r. 15*l.* | 1,210 |

By T. B. WESTACOTT.

| | |
|---|---|
| Kentish Town.—17, Crogsland-rd., u.t. 68 yrs., g.r. 8*l.*, r. 45*l.* | 445 |
| Hornsey.—11 and 29, Hornsey Park-rd., f., r. 68*l.* | 860 |
| Chalk Farm.—29, Ainger-rd., u.t. 66½ yrs., g.r. 5*l.* 10s., r. 75*l.* | 805 |
| Bexhill-on-Sea, Sussex.—4 and 6, Albert-rd., f., r. 100*l.* | 1,500 |
| Margate, Kent.—St. Paul's-rd., "Florence Cottage," f., r. 32*l.* | 550 |
| Haverstock Hill.—5, Queen's-cres., f., r. 55*l.* | 860 |
| Kentish Town.—53, Victoria-rd., u.t. 37 yrs., g.r. 5*l.*, r. 36*l.* | 335 |
| Hampstead-rd.—83 & 85, Robert-rd. u.t. 25 yrs., g.r. 32*l.*, r. 93*l.* | 535 |

By G. B. HILLIARD & SON (at Chelmsford).

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| Stock, Essex.—"Rose Cottage," f. | 300 |
| Great Leighs, Essex.—An enclosure of land, 0 a. 3 r. 10 p., f. | 100 |

May 2.—By J. W. KEMSLEY.

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| East Ham.—Vicarage Lane, &c., a block of building land, 24 a., f. | 8,030 |
| West Ham.—Plashet-rd., f.g.r., 15*l.* 15s., reversion in 68 yrs. | 385 |

By NOKES & NOKES.

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| Kentish Town.—38, Lismore-rd., u.t. 62 yrs., g.r. 8*l.*, r. 34*l.* | 250 |
| Pimlico.—Warwick-st., a profit rental of 20*l.* for 13 yrs. | 135 |
| Kentish Town.—23, Gospel Oak-grove, u.t. 67 yrs., g.r. 6*l.*, r. 52*l.* | 275 |

By WEATHERALL & GREEN.

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| Clapham.—4, 5, 6, 7, 8, and 9, Cautley-av., u.t. 86 yrs., g.r. 50*l.* 6s. 6d., r. 295*l.* | 2,760 |
| 13, Cautley-av., u.t. 86 yrs., g.r. 7*l.* 7s., r. 45*l.* | 425 |
| 76 to 90 (even), Sugden-rd., u.t. 87 yrs., g.r. 56*l.*, r. 269*l.* | 2,220 |
| Woking, Surrey.—Kettlewell-lane, &c., six plots of building land, f. | 1,575 |
| Canning Town.—13 to 21 (odd), York-st., f., r. 78*l.* | 600 |

By W. R. NICHOLAS & CO. (at Rugby).

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| Yelvertoft, Northants.—"The Brooksyde Estate," 118 a. 3 r. 19 p., f. | 3,500 |

By A. F. HOBBS (at Cirencester).

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| Poole Keynes, Wilts.—"Ellmoors Farm," 18 a. 2 r. 3 p., f. | 580 |
| Minety, Wilts.—"Elizabeth's Farm," 27 a. 3 r. 35 p., f. | 650 |
| Five enclosures, 29 a. 2 r. 0 p., f. and c. | 480 |

By CASTIGLIONE & GIBBINGS (at Carlisle).

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| Kirkandrews, Cumberland.—"Reservoir Farm," 50 a., f., r. 50*l.* | 1,400 |

May 3.—By DUNN, SOMAN, & COVERDALE.

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| Canonbury.—30, 32, and 33, Compton-rd., u.t. 47 yrs., g.r. 8*l.*, e.r. 114*l.* | 1,490 |

By F. JOLLY & Co.

Hackney.—Downs-rd., "St. Oswald's," f..... £1,600
Mile End.—153 and 155, Bancroft-rd., f., r. 52*l.* .. 610

By J. M. KLENCK & Co.

Mile End.—9 and 18, Trafalgar-sq., f..... 795
Camberwell.—16, Ivanhoe-rd., u.t. 78 yrs., g.r. 5*l.* 5s., r. 24*l.* ..... 210

By S. SINGLE.

Pitsea, Essex.—Main-rd., a freehold cottage and 9 a. 2 r. 0 p. ..... 230
Main-rd., three enclosures of land, 19 a. 3 r. 10 p., f. ..... 310

By DEBENHAM, TEWSON, & Co.

Camberwell.—Denmark-hill, &c., f.g.r. 130*l.*, reversion in 10½ yrs. ..... 15,000
Valmar-rd., f.g.r. 92*l.* 17s., reversion in 94 yrs... 2,830
30 to 44 (even), Coldharbour-lane, f., r. 322*l.* 10s. 4,760
Pimlico.—1, 2 and 3, Ranelagh-grove, u.t. 25 yrs., g r. 15*l.*, r. 137*l.* ..... 1,190
63, Ebury-st., u.t. 23 yrs., g.r. 6*l.* 10s., r. 130*l.* 1,650
36, South Eaton-pl., u.t. 25½ yrs. g.r. 15*l.* r. 100*l.* 1,100
51, Eaton-ter., u.t. 23 yrs., g.r. 5*l.* r. 65*l.* ..... 650
Dulwich.—14, Forest Hill-rd., u.t. 84 yrs., g.r. 10*l.*, r. 52*l.* ..... 445
Brixton.—7, Lorn-rd., u.t. 28 yrs., g.r. 5*l.* r. 45*l.*.. 360

By J. & W. JOHNSON & Co. (at Masons' Hall Tavern).

Old Ford.—Eglinton-rd., "The Earl of Eglinton" p.-h., u.t. 70½ yrs., r. 125*l.*, with goodwill .... 17,500

By HEPPER & SONS (at Leeds).

Guiseley, Yorks.—"The Ings Mills Estate," area 2 a. 3r. 15 p., f. ..... 2,650
"Coat Ing" enclosure, 2 a. 2 r. 0 p., f..... 425

By JOSEPH HOPPER (at Hawes).

Hawes, Yorks.—"Rookhurst" and two cottages adjoining, f..... 2,000
A freehold dairy farm, area 213 a..... 2,625
Five cottages and a plot of ground, f. ..... 410
Garsdale, Yorks.—"Mudbecks Farm," 11 a. 3 r. 2 p., f..... 545
Various enclosures of land, 69 a. 0 r., 18 p., f., .. 4,905

By H. J. CHEFFINS (at Saffron Walden).

Saffron Walden, Essex.—High-st., a freehold residence and grounds, with malting premises, r. 70*l.* ..... 1,100
Little Chesterford, Essex.—"King's Farm," 16 a. 3 r. 5 p., f., r. 30*l.* ..... 430
Hempstead, Essex.—Two freehold fields, 4 a. 0 r. 8 p..... 108

By THOMPSON & Co. (at Exeter).

Tedburn St. Mary, Devon.—"Little Fairwood Farm," 29 a. 0 r. 32 p., f..... 510

By NIGHTINGALE, PHILLIPS, & PAGE (at Cobham).

Cobham, Surrey.—Tinman's-row, eight freehold cottages, and 1 a. 1 r. 2 p. ..... 740

By H. G. POTTER (at Hampstead).

Hampstead.—Worsley-rd., a freehold building site, area 8,000 ft. ..... 1,250

May 4.—By BAXTER, PAYNE, & LEPPER.

Bexley Heath, Kent.—"East Lodge," and 4 a. 3 r. 6p., f. ..... 2,900
Farnborough, Kent.—Wellbrook-rd., two plantations, 3 a. 2 r. 31 p., f. ..... 1,220
Wellbrook-rd., enclosure of nursery ground, 0 a. 3r. 0 p., f. ..... 580
London-rd., a freehold plantation, 2 a. 0 r. 20 p. 780

By ALFRED SAVILL & SON.

Loughton.—England's-lane, two villas, two cottages, and 2 a. 2 r. 13 p., f..... 1,050
Stanford-le-Hope, Essex.—An enclosure of building land, 30 a. 0 r. 13 p., f..... 3,000
Fobbing, Essex.—An enclosure of land, 20 a. 3 r. 2 p., f. ..... 525
Vange, Essex.—An enclosure of land, 8 a. 1 r. 0 p., f..... 330

By AUSTIN & AUSTIN.

Peckham.—20 to 38 (even), Parkstone-rd., u.t. 66½ yrs., g.r. 52*l.* 10s. ..... 2,060

By DOUGLAS YOUNG & Co.

South Lambeth.—7 and 8, Rutland-st., u.t. 57 yrs., g.r. 6*l.* ..... 600
12, 13, and 14, Wyvil-rd., u.t. 48 yrs., g.r. 14*l.* 12s. 6d. ..... 800
29, 30, 35, 36, 40, 41, 42, 43, 49, and 50, Riverhall-st., u.t. 34 yrs., g.r. 66*l.* 10s. ..... 2,435
62, 64, and 66, Hartington-rd., u.t. 34 yrs., g.r. 16*l.* 10s., r. 114*l.* ..... 880
Balham.—11, 13, 33, 35, 57, and 59, Dendy-st., u.t. 35½ yrs., g.r. 18*l.* ..... 930
1, 3, 5, and 7, Zennor-rd., u.t. 67 yrs., g.r. 20*l.*.. 710
Hoxton.—313, New North-rd., u.t. 10½ yrs., g.r. 8*l.*, r. 45*l.* ..... 175

By WILTSHIRE & THURGOOD.

Lee.—6, 31, 33, 37, and 39, Manor-pk., u.t. 61½ yrs., g.r. 12*l.* 10s., e.r. 250*l.* ..... 1,835
Manor-pk., i.g.r. 28*l.* 18s., u.t. 68 yrs., g.r. 5*l.*.. 455

By W. F. BEAVAN (at Widnes).

Widnes, Lancs.—Three freehold cottages and 0 a. 3 r. 15 p. ..... 305
Three copyhold houses and 3 a. 1 r. 32 p. ..... 1,410

By H. DUKE & SON (at Bridport).

Marshwood, Dorset.—"Gerrant's Farm," 94 a. 2 r. 25 p., f. ..... 2,360
Three enclosures, 15 a. 2 r. 10 p., f. ..... 270

By BRUTON, KNOWLES & Co. (at Shurdington).

Shurdington, &c., Glos.—"The Poplars Farm," 146 a. 2 r. 3 p., f..... 4,000
The "New Inn," f., r. 37*l.* ..... 1,525
Two freehold cottages and piece of garden land 105
Enclosures of pasture orcharding, 4 a. 3r. 35 p., f. 625
Various enclosures of land, 85 a. 0 r. 19 p., f. .. 3,355

May 5.—By DRIVERS (Holloway).

Holloway.—2, 10, 12, and 14, Pemberton-ter., u.t. 53 yrs., g.r. 42*l.*, r. 160*l.* ..... 1,560
Stoke Newington.—61, Albion-road, f., r. 125*l.* .. 2,250
Stamford Hill.—1, 3, 5, and 7, The Crescent, u.t. 73½ yrs., g.r. 28*l.* ..... 435

By J. H. LYNCH.

Clerkenwell.—6, 7, and 7a, Upper Baker-st., u.t. 13½ yrs., g.r. 32*l.*, r. 98*l.* ..... 300
25, River-st., u.t. 14¼ yrs., g.r. 4*l.*, r. 36*l.* ..... 200
50, St. Helena-pl., u.t. 13 yrs., g.r. 3*l.* 15s..... 100
Kentish Town.—38, Highgate-rd., u.t. 61 yrs., g.r. 7*l.* ..... 480

By C. C. & T. MOORE.

Stepney.—23, 25, and 28, Wellesley-st., u.t. 27 yrs., g.r. 7*l.* 1s. 6d. ..... 525
Whitechapel.—20d and 20e, Newcastle-pl.; also l.g.r. 10*l.* 10s., u.t. 16 yrs., g.r. 17*l.* 10s. ..... 230
Peckham.—38, Clifton-rd., f., r. 30*l.* ..... 330
Rotherhithe.—234 to 262 (even), Rotherhithe New-rd., u.t. 62½ yrs., g.r. 31*l.*, r. 554*l.* 8s. ..... £4,990
Bow.—137, Bow-rd., u.t. 33 yrs., g.r. 7*l.*, r. 70*l.* .. 700
Stepney.—26 and 28, Caroline-st., u.t. 60 yrs., g.r. 8*l.* 10s. ..... 220
Willesden.—14, Church-rd., u.t. 71 yrs., g.r. 8*l.*, e.r 55*l.* ..... 555

By ORGILL, MARKS, & ORGILL.

Brentford, Middx. — High-st., "The Three Pigeons" p.-h., f., r. 100*l.* ..... 5,000

By ALDRIDGE, DOUGLAS, & Co.

Anerley.—18, Beverley-rd., u.t. 67 yrs., g.r. 11*l.*, e.r. 55*l.* ..... 360
Stoke Newington.—73, Lordship-rd., u.t. 44 yrs., g.r. 8*l.* 10s., r. 85*l.* ..... 775
41, Lordship-rd., u.t. 64 yrs., g.r. 6*l.*, r. 45*l.* .... 455

By H. J. BLISS & SONS.

Bethnal Green.—65 and 71 to 85 (odd), Somerford-st., u.t. 9½ yrs., g.r. 45*l.* ..... 500
6 to 10, Surat-pl., f. ..... 690
7, 8, and 30, Type-st., and 23 and 25, Harold-st., f. ..... 960
36, 38, 40, and 42, Menotti-st., f. ..... 1,825
Clapton.—12, 14, and 16, Cricketfield-rd., u.t. 77 yrs., g.r. 19*l.* 10s., r. 114*l.* ..... 1,200
Stoke Newington.—31, Cazenove-rd., u.t. 75½ yrs., g.r. 9*l.*, r. 55*l.* ..... 495
Chiswick.—51, Upham Park-rd., u.t. 70½ yrs., g.r. 6*l.* 6s., e.r. 35*l.* ..... 240

By STIMSON & SONS.

Hoxton.—37, Newton-st., u.t. 34 yrs., g.r. 5*l.* r. 34*l.* ..... 300
29, Rushton-st., u.t. 37 yrs., g.r. 5*l.*. r. 32*l.*.... 270
1, Northport-st., u.t. 33½ yrs., g.r. 5*l.*, r. 32*l.* .. 250
12, 13, and 14, Clift-st., u.t. 19 yrs., g.r. 42*l.*.... 140
Bermondsey.—59, 61, 104, and 106, Spa-rd., f., r. 162*l.* 8s. ..... 2,250
116 and 132, Jamaica-rd., f., r. 97*l.* 10s. ..... 1,360
143, Jamaica-rd., u.t. 48½ yrs., g.r. 6*l.* 6s., r. 38*l.* 430
Lambeth.—35, Barbel-st., u.t. 38½ yrs., g.r. 10*l.*, r. 52*l.* ..... 290
Dulwich.—Upland-rd., i.g.r. 13*l.*, u.t. 90½ yrs., g.r. nil ..... 310
South Lambeth.—26 and 28, Heyford-av., u.t. 89½ yrs., g.r. 17*l.* ..... 810
45 and 61, Bonnington-sq., u.t. 81¼ yrs., g.r. 15*l.* 765
Lambeth.—Lambeth Walk, &c., i.g.r. 352*l.* 12s., u.t. 11½ yrs., g.r. 243*l.* 10s., with reversion.... 730

By BAXTER, PAYNE, & LEPPER (at Bromley).

Bromley Common, Kent.—Elliott-rd., &c., seven plots of land, f. ..... 251

By WEATHERALL & GREEN (at Limerick).

Limerick, Ireland.—Dock-rd., freehold warehouse property, and a building site; also 15 and 16, St. Mary-st., total area 5 a. 5 r. 23 p., subject to head and quit rents of 28*l.* 10s., 1¼d. .... . 1,100

May 6.—By RIPPON, AVRE, & Co. (at Exeter).

Rockbeare, Devon.—"Westcott Farm," 69 a. 0 r. 15 p., f. ..... 2,550

By COOK & BIRMINGHAM (at Exeter).

Cullompton, Devon.—"Higher Upton Estate," 100 a. 2 r. 9 p., f. ..... 4,250

By HODGSON & FARROW (at Castleton).

Danby, Yorks.—"Danby Botton Farm," 111 a., f. 2,600
"The Howe Farm," 100 a., f. ..... 3,250

May 7.—By RUSHWORTH & STEVENS (at Framlingham).

Saxtead Green, Suffolk.—"Red House Farm," 73 a. 2 r. 31 p., c. ..... 1,160

May 6.—By RUSHWORTH & STEVENS.

Notting Hill.—89, 91, and 95, Portland-rd., u.t. 51 yrs., g.r. 21*l.*, r. 108*l.* ..... 790
Marylebone.—2, Upper Ogle-st., u.t. 27 yrs., g.r. 8*l.*, r. 95*l.* ..... 680
42, Bolsover-st., u.t. 13 yrs., g.r. 38*l.*, r. 80*l.*.... 365

By P. & G. GEEN.

Lambeth.—129 and 131, Stamford-st., u.t. 11 yrs., g.r. 6*l.* ..... 450

By HARDS & BRADLY.

Lee.—Dorville-rd., u.t. 77 yrs., g.r. 10*l.*, r. 65*l.* .. 700

By MILLAR, SON & Co.

Staines, Middx.—Church-st., "Riverside House," and 2 a., f. ..... 2,600
Church-st., "Riverside," and 1 a. 2 r. 39 p., f. .. 2,100

By WOODS & SNELLING.

Blackfriars.—17, Blackfriars-rd., f., r. 120*l.* ..... 2,360
Finsbury.—106, Clifton-st., f., r. 36*l.* ..... 705
Harmondsworth, Middx.—Great Bath-rd., "The Ancient Foresters'" B.-h., and four cottages adjoining, f., r. 80*l.* 4s.....—..... 1,360
Bolton's-lane, f., g.r. 2*l.* 10s., reversion in 51 yrs. 100
Hanwell.—3, Cambridge Gardens, u.t. 87 yrs., g.r. 5*l.*, r. 30*l.* ..... 352

May 9.—By PERCIVAL HODSON.

Kilburn.—1 to 11, Gordon-rd., f., r. 348*l.* ..... 3,550
Islington.—11, Denmark-st., u.t. 20 yrs., g.r. 6*l.*, r. 38*l.* ..... 190
Barnsbury.—58, Roman-rd., u.t. 61 yrs., g.r. 7*l.*, r. 33*l.* ..... 365
Holloway.—18, Brunswick-rd., u.t. 46 yrs., g.r. 5*l.* 230

By MULLETT, BOOKER, & Co.

Hyde Park.—28, Craven Hill Gardens, u.t. 66 yrs., g.r. 28*l.* ..... 1,750
47, Edgware-rd., u.t. 19 yrs., g.r. 12*l.* ..... 760
Islington.—Canonbury-rd., &c., i.g.r. 70*l.*, u.t. 19 yrs., g.r. 8*l.* ..... 675

By G. B. SMALLPEICE.

Kensington, Campden Hill-rd., a leasehold rental of 455*l.*, u.t. 29½ yrs. ..... 5,500
Campden Hill-rd., a leasehold rental of 475*l.*, increasing to 620*l.*, u.t. 29½ yrs..... 5,700

By BLAKE & CARPENTER.

Croydon.—Church-st., "The Gun Tavern," f., r. 150*l.* ..... 4,000
Church-st., f.g.r. 38*l.* 10s., reversion in 62 yrs. .. 1,322
Waddon-rd., &c., f.g.r. 34*l.*, reversion in 62 yrs. 1,115
Dryden-rd., f.g.r. 125*l.*, reversion in 98 yrs. .... 3,000
Mitcham, Surrey.—Western-rd., "The Prince of Wales" p.-h., &c., f.g.r. 31*l.* 10s., reversion in 2 yrs. ..... 7,650

By ELLIOTT, SON, & BOVTON.

Oxford-st.—3 and 6, North-row, u.t. 9 yrs., g.r. 6*l.*, r. 147*l.* 10s. ..... 965
Belgravia.—9 and 11, Pembroke-mews North, u.t. 11 yrs., g.r. 35*l.*, e.r. 370*l.* ..... 1,900
Marylebone.—3, Gildea-st., u.t. 9 yrs., g.r. 20*l.*, r. 120*l.* ..... 550
Norwood.—66 to 80 (even), Church-rd., u.t. 80½ yrs., g.r. 140*l.*, r. 495*l.* ..... 6,320
Finsbury Park.—33, 37, and 39, Alexander-rd., u.t. 60 yrs., g.r. 37*l.* 16s., r. 150*l.* ..... 1,220
41, 43, and 61, Gloucester-rd., u.t. 60 yrs., g.r. 45*l.* 3s., r. 195*l.* ..... £1,800
22 and 24, Portland-rd., u.t. 60 yrs., g.r. 25*l.* 4s., r. 115*l.* ..... 965

By HEPPER & SONS (at Leeds).

Leeds.—78 and 80, Reuben-st., f., r. 27*l.* 6s..... 358

By RENDELL & SYMONS (at Teignmouth).

Bishopsteignton, Devon.—"Venn Estate," 209 a. 2 r. 4 p., f. ..... 9,000

May 10.—By DEBENHAM, TEWSON, & Co.

City of London.—37, Wood-st. and 5, Little Love-lane, f., r. 500*l.* ..... 11,750
Leytonstone.—Southwell-grove-rd., f.g.r. 26*l.*, reversion 88 yrs. ..... 650

By MARK LIELL & SON.

Snaresbrook.—Tavistock-rd., "Spring Lawn," f., e.r. 70*l.* ..... 1,200
Harold Wood, Essex.—Avenue-rd., a block of freehold building land, 5 a..... 850

By ROGERS, CHAPMAN, & THOMAS.

Herne Hill.—25 and 27, Fawnbrake-av., u.t. 77 yrs., g.r. 2*l.*, r. 87*l.* ..... 850
Kensington.—100 and 100a, Lexham-gardens, u.t. 72½ yrs., g.r. 5*l.*, r. 235*l.* ..... 2,050

By TAYLOR, LOVEGROVE, & Co.

Wandsworth.—22, North-st. and l.g.r. 10*l.*; u.t. 52 yrs., g.r. 20*l.*; also a freehold plot of land in rear ..... 400

By VENTOM, BULL, & COOPER.

Clapham.—Larkhall Rise, f.g.r. 12*l.*, reversion in 3¾ yrs. ..... 1,265

By FLEURET, SONS, & ADAMS (at "Masons' Hall" Tavern).

City of London.—St. Martins'-le-Grand, "The Lord Raglan" p.-h., u.t. 49 yrs., r. 375*l.*, with goodwill ..... 40,000

By W. ROLFE (at "Masons' Hall Tavern").

Camberwell.—Lothian-rd., the "Lothian Arms" p.-h., u.t. 20 yrs., r. 120*l.*, with goodwill..... 3,110

By SCHOFIELD, EVANS, & LOADER (at "Masons' Hall" Tavern).

Pimlico.—Sutherland-st., the "White Ferry House" p.-h., u.t. 40 yrs., r. 150*l.*, with goodwill..... 37,310

By STEPHENSON & ALEXANDER (at Cardiff).

Cardiff, Glamorgan.—27, Oakfield-st., u.t. 73 yrs., g.r. 5*l.* 10s. ..... 500

May 11.—By WALFORD & WILSHIN.

Anerley.—81, Croydon-rd., u.t. 50 yrs., g.r. 15*l.* 10s., e.r. 75*l.*..... 650
Croydon-rd., five plots of building land ..... 790
Stodart-rd., freehold stabling and building land 1,065
New Cross.—125, Lewisham High-rd., u.t. 47 yrs., g.r. 3*l.* 6s. 8d., r. 70*l.* ..... 720

By REYNOLDS & EASON.

Sydenham.—16, 18, 24, to 31, Mount Ash-rd., u.t. 91 yrs., g.r. 60*l.* ..... 945
Hackney.—Mare-st., i.g.r. 45*l.*, u.t. 42 yrs., g.r. 6*l.* 720

By H. DONALDSON & SON.

Stoke Newington.—67, Mildmay-rd., u.t. 51 yrs., g.r. 6*l.* 6s., r. 38*l.* ..... 405
136, 138, and 140, Mildmay-rd., u.t. 53 yrs., g.r. 14*l.*, r. 127*l.* ..... 1,270
West Ham.—66 and 68, Park-rd., f..... 810
Chingford.—Chivers-rd., three plots of building land ..... 100
Dalston.—9, 11, 13, and 15, Richmond-rd., u.t. 18½ yrs., g.r. 20*l.*, r. 118*l.* ..... 605
Dulwich.—62 and 64, Rodwell-rd., u.t. 80 yrs., gr. 9*l.* 10s..... 455

By ARTHUR ALDRIDGE & Co.

Croydon.—47, 49, 51, and 53, Quadrant-rd., f., .. 1,945

By SEYMOUR, MCINTOSH, & Co. (at Camberwell).

Camberwell.—25 to 33 (odd), Cork-st.. u.t. 19 yrs., g.r. 18*l.* ..... 500

By HILLIER & PARKER (at Wantage).

Wantage, Berks.—"Lattin Down Farm," 323 a. 2 r. 37 p., f. ..... 3,000

By CHURTON, ELPHICK, & Co. (at Crewe).

Wem, Salop.—"The Trench Hall Estate," 284 a. 0 r. 33p., f..... 17,300

May 12.—By C. C. & T. MOORE.

Minories.—9, Great Prescott-st., f., r. 75*l.* ..... 1,700
Whitechapel.—91, Leman-st., f., r. 78*l.* ..... 1,330
Stoke Newington.—6, Manor-rd., f., r. 65*l.* ..... 1,000
Stepney.—Market-st., f.g.r. 40*l.*, reversion in 77 yrs. ..... 1,200
34, 36, 38, and 40, Ben Jonson-rd., f., r. 124*l.* .. 1,865

By NEWBON, EDWARDS, & SHEPHARD.

Barnsbury.—1, 2, and 3, Boxworth-grove, u.t. 38 yrs., g.r. 24*l.*, e.r. 150*l.* ..... 995
Holloway.—43, Parolles-rd., u.t. 89½ yrs., g.r. 6*l.*, r. 32*l.* ..... 310
Bowes Park.—20 and 22, Myddleton-rd., u.t. 93 yrs., g.r. 13*l.*, r. 60*l.* ..... 510
Finsbury Park.—62, Stroud Green-rd., u.t. 69 yrs., g.r. 8*l.* 8s., r. 90*l.* ..... 1,210
Wood Green.—17 to 20, King's-rd., u.t. 68 yrs., g.r. 12*l.*, r. 78*l.* ..... 455

By G. TROLLOPE & SONS.

Hyde Park.—3, Rutland Garden-mews, u.t. 34 yrs., g.r. 5s. ..... 1,600

By FAREBROTHER, ELLIS, & Co.

Holborn.—21, Fulwood's-rents, area 630 ft., f., r. 34*l.* ..... 1,200
Regent-st.—11, New Burlington-st., area 1,610 ft., f., r. 500*l.* ..... 15,700
New Bond-st.—34, Bruton-st., and 34, North Bruton Mews, u.t. 26 yrs., g.r. 60*l.*, r. 450*l.* .. 4,500
Barnes.—Lower Richmond-rd., "The Bungalow," and 0 a. 1 r. 20 p., f., r. 60*l.* ..... 1,200
White Hart-lane, &c., three plots of building land, 1 a. 3 r. 19 p., f. ..... 3,025

By WHITE & SON.

Westcort, Surrey.—"Rokefield" 10½ a., f..... 7,600

By STIMSON & SONS.

Bourne End, Bucks.—2 and 3 Spring Gardens, f., e.r. 90*l.* ..... 1,010
Hampstead.—52 and 53, Grayton-rd., u.t. 70¾ yrs., g.r. 16*l.*, r. 90*l.* ..... 915
Barnsbury.—21, Wellington-rd., u.t. 62½ yrs., g.r. 6*l.*, r. 32*l.* ..... 310
Islington.—71 and 73, Cloudesley-rd., u.t. 71 yrs., g.r. 12*l.*, r. 70*l.* 4s..... 460
Caledonian-rd.—No. 217, u.t. 42½ yrs., g.r. 8*l.* r. 44*l.* ..... 390
25, Bemerton-st., u.t. 42½ yrs., g.r. 6*l.*, r. 36*l.* .. 350
Camberwell.—295, Camberwell-rd., f., e.r. 85*l.*.... 1,500
Peckham.—212 and 214, St. George's-rd., f., r. 67*l.* 12s..... 730
Cator-st., &c., f.g.r. 9*l.*, reversion in 65 yrs. .... 225

# COMPETITIONS, CONTRACTS, AND PUBLIC APPOINTMENTS.

## COMPETITIONS.

| Nature of Work. | By whom Advertised. | Premiums. | Designs to be delivered. |
|---|---|---|---|
| *Laying-out Park and Recreation Grounds | Widnes Jubilee Comm. Committee | 35, 10, and 5 guineas | July 1 |
| *Exhibition Buildings | Glasgow International Exhibition | 200, 150, and 100 guineas | Aug. 15 |

## CONTRACTS.

| Nature of Work or Materials. | By whom Required. | Forms of Tender, &c. Supplied by | Tenders to be delivered. |
|---|---|---|---|
| Street Works, Hamers Yard, &c. | Bury (Lancs.) Corp. | Boro Engr. Bank-st. Bury | May 23 |
| Greenhouse, Pitville Park | Cheltenham Corp. | Boro Surv. Municipal Offices, Cheltenham | do. |
| Sewers, Church Alley | Clayton-le-Moors U.D.C. | A. Dodgeon, Surv. Council Offices, Clayton-le-Moors | do. |
| Ten Dwelling Houses, Derwent-avenue, Holbeck | Leeds Corp. | City Engr. Municipal Buildings | do. |
| Alterations to Schools, Hamsterley | ,, | F. H. Livesey, Archt. Market-pl. Bishop Auckland | do. |
| Shoe Factory, Kirkstall-road, Leeds | ,, | P. Robinson, Archt. 72, Albion-st. Leeds | do. |
| Five Storey Warehouse, Grace-street and Park-lane, Leeds | Bainbridge & Co. Ltd. | T. Winn, Archt. 92, Albion-street, Leeds | do. |
| Alterations to Blue Bell Hotel, Glasshouse-street, Leeds | F. A. Cliff | do. | do. |
| Engine House, &c. | Wombwell U.D.C. | J. Robinson, Surv. Council Offices, Wombwell | do. |
| Additions, St. Andrew's School, Hitchin | A. Schofield | J. Shilcock, Archt. Hitchin | do. |
| House and Stables, Alfreton | | Vallance & Westwick, Archts. White Hart Chambers, Mansfield | do. |
| Foreman's House at Sewage Works | Uxbridge U.D.C. | W. L. Eves, Surv. 54, High-street, Uxbridge | do |
| Sewering, Paving, &c. Oakley-gardens | Hornsey U.D.C. | E. J. Lovegrove, C.E. Southwood-lane, Highgate | do. |
| Sewers, Muswell Hill-place, Muswell Hill | do. | do. | do. |
| Engine House, &c. Calder Vale | Wakefield Corp. | R. Porter, C.E. Town Hall, Wakefield | do. |
| Granite (300 tons) | Desboro' (Northants) U.D.C. | W. T. Streather, Surv. Desborough | May 24 |
| Engine Shed, &c. Rose-grove, Manchester | L. & Y. R. Co. | Engineer, Hunts' Bank, Manchester | do. |
| Public Convenience, Chapel-road | Southampton Corp. | W. B. G. Bennett, Boro Engr. Municipal Offices, Southampton | do. |
| Painting, &c. Sessions House, Maidstone | Kent C.C. | County Surv. 86, Week-street, Maidstone | do. |
| Sewers, &c. Oadby, near Leicester | Blaby R.D.C. | H. Walker, C.E. Angel-row, Nottingham | do. |
| Sewage Works | Knutsford U.D.C. | W. J. Downes, Surv. Knutsford | do. |
| Sewers, &c. | Wallasey U.D.C. | W. H. Travers, Surv. Public Offices, Egremont, Cheshire | do. |
| Culvert, Wakefield-road | Huddersfield Corp. | Boro Surv. Town Hall, Huddersfield | do. |
| Additions to Convent, Bandon, Ireland | | M. A. Hennessy, Archt. 74, South-mall, Cork | do. |
| Sewerage Works | Bangor (Ireland) Joint Burial Board | T. Morgan, Bangor | do. |
| Water Supply Works, West Calder | Midlothian C.C. | J. Tait, C.E. Wishaw | do. |
| Widening Temple Hill, co. Dublin | Blackrock Township Commissioners | R. F. Heron, Town Hall, Blackrock, co. Dublin | do. |
| *Deals and Battens | Eton Union | The Clerk, Slough, Bucks. | do. |
| *Workshops at Hospital | Metropolitan Asylums Board | A. & C. Harston, 15, Leadenhall-st. E.C. | May 25 |
| Destructor Shed | St. Helens (Lancs.) Corp. | G. J. C. Broom, C.E. Town Hall, St. Helens | do. |
| House, Eaglescliffe, Stockton-on-Tees | ,, | C. H. Marriott & Son, Archts. West Park-st. Dewsbury | do. |
| 500 tons Granite Spalls | West Ham Union | F. E. Hillary, Gdns Offices, Union rd. Leytonstone | do. |
| Street Works, Borough-road East | Middlesborough Corp. | F. Baker, C.E. Municipal Bldgs. Middlesborough | do. |
| Houses, &c. Lumley-street, Attercliffe, Sheffield | Sheffield Corp. | C. F. Wike, C.E. City Surv. Town Hall | do. |
| Shop, &c. Clarence-road, Bristol | B. Shepherd | H. Williams, Archt. 24, Clare-st. Bristol | do. |
| *Paving and Making-up Road | Fulham Vestry | C. Botterill, Town Hall, Waltham Green, S.W. | do. |
| Additions to Schools | Ugborough (Devon) Sch. Bd. | E. Windeatt, 19, High-st. Totnes | May 26 |
| Additions to Workhouse, Stow Hill | Newport (Mon) Union | B. Lawrence & Son, Archts. Dock-street, Newport | do. |
| Electricity Works, Robin Bank-road | Darwen (Lancs) Corp. | Borough Engr. Town Hall, Darwen | do. |
| Thirteen Houses, Etherby-lane | Bishop Auckland Co.-op. Soc. Ltd. | W. Perkins, Archt. Victoria-st. Bishop Auckland | do. |
| *Jarrah Wood Paving | Hampstead Vestry | Surveyor, Vestry Hall | do. |
| *Swings, &c. | West London School District | Superintendent at School, Ashford, Middlesex | May 27 |
| Sanatorium | Hull Corporation | A. E. White, City Engr. Town Hall, Hull | do. |
| Concreting, &c. Turvielaws, W. Wooler | Northumberland C.C. | County Surveyor, Moot Hall, Newcastle | do. |
| Twelve Cottages, Coldwell-lane, Felling | Windy Nook Co.-op. Soc. Ltd. | H. Miller, Archt. Wesley-terrace, Felling | do. |
| Police Station, Southwold | East Suffolk C.C. | H. Miller, C.E. 16, Museum-street, Ipswich | do |
| Roof at Cattle Market | Hull Corporation | A. E. White, City Engr Town Hall, Hull | do. |
| *Alterations at Workhouse | St. George's-in-the East Guardians | G. A. Wilson, Vestry Hall, Cable-street, E. | do. |
| Sewage Purification, Timberbottom, near Bradshaw Bridge | Turton U.D.C. | V. W. Laithwaite, Surv. Public Offices, Bromley Cross, near Bolton | May 28 |
| Brick Tanks at Pumping Station | Sandbach U.D.C. | W. Wyatt, Engr. Bryndwr, All Saints, Shrewsbury | do. |
| Reading Room, &c. Talkin Village, Brampton | The Trustees of the Riverside Conservative Club | H. Scorer, Naworth Estate Office, Brampton | do. |
| Club Premises, Neville-st. Cardiff | | Veall & Sant, Archts. 5 & 6, Arcade-chambers, High-street, Cardiff | do |

## CONTRACTS—*Continued.*

| Nature of Work or Materials. | By whom Required. | Forms of Tender, &c. Supplied by | Tenders to be delivered |
|---|---|---|---|
| Goods Warehouse, Banbridge | G. N. R. Co. Ireland | District Engineer, Amiens-street Terminus, Dublin | May 30 |
| Lifeboat Shed, Carrickfergus Harbour, County Antrim | Royal National Lifeboat Institution | J. C. Holden, Carrickfergus | do. |
| House, Aughuacloy, Ireland | R. J. Montgomery | J. J. Phillips & Son, Archts. 61, Royal-avenue, Belfast | do. |
| Chancel at Parish Church, Aghalee, Soldierstown, Ireland | ,, | Rev. J. W. Sleator, Aghalee, Glebe, Lurgan | do. |
| Seven Houses and Shops, Kirkstall-road, Leeds | B. Greaves | T. Winn, Archt. 92, Albion-street, Leeds | do. |
| *Removal of Chimney | Edinburgh and Leith Gas Comrs. | W. R. Herring, Gas Works, New-street, Edinburgh | do. |
| Paving, Kerbing, &c. Station-road | Walton-on-the-Naze U.D.C. | H. W. Gladwell, Surv. Council Offices, Walton-on-the-Naze | May 31 |
| *Painting, Whitewashing, &c. | Chelsea Guardians | Lansdell & Harrison, 38, Bow-lane, E.C. | do. |
| Board Room at Workhouse | Alverstoke Union | H. F. A. Smith, Archt. Star-chambers, Gosport | June 1 |
| Business Premises, York and Regent-streets, Blyth, Northumberland | ,, | A. A. Wintle, Archt. 10, Waterloo-road, Blyth | do. |
| Show Yards | Somerset County Agricultural Assoc. | A. B. Cottam, Surv. Bridgwater | do. |
| Club Premises, Ripponden, Yorks. | The Conservatives | C. F. L. Horsfall & Son, Lord-street Chambers, Halifax | do. |
| *Works and Materials | Hove U.D.C. | H. H. Scott, Town Hall | do. |
| House and Cottages, Bryncoch | Neath Union | D. M. Davies, Archt. 58, Water-street, Neath | June 2 |
| Gasholder Tank | Eastbourne Gas Co. | H. E. Jones, Engr. Harford-street, Stepney | June 4 |
| Repairs to Breakwater Pier | Wicklow Harbour Trustees | Engineer, 8, Great George-street, S.W. | June 6 |
| Harbour Works | Wicklow Harbour Commissioners | A. Rendel, Engr. 8, Great George-street, Westminster, S.W. | do, |
| *Park Keeper's Lodge | Hornsey U.D.C. | E. J. Lovegrove, Offices, Southwood-lane, Highgate, N. | do. |
| Sanitary Works, Lyefield Schools | Charlton Kings S.B. | J. Villar, Archt. No. 1, Cambray | do. |
| Lime (7,000 tons) | Bristol Gas Co. | J. Phillips, Gas Offices, Canon's Marsh, Bristol | June 7 |
| *Post Office, Weston-super-Mare | Commissioners H. M. Works | 12, Whitehall-place, S.W. | do. |
| *Electric Light Station | Watford U.D.C. | Gordon, Lowther, & Gunter Finsbury House, Bloomfield-street, E.C. | June 8 |
| *Stoneware, &c. Sewers | Wycombe R.D.C. | Taylor, Sons, & Crimp, 27, Great George-st. S.W. | do. |
| *Covered Service Sewer | Colne Valley Water Co. | do. | June 11 |
| Drill Hall, Brynmawr, Wales | ,, | F. Baldwin, Archt. Brecon | No date |
| Painting, &c. 91, Richmond-road, Cardiff | C. J. Smith | A. Burgham, Redbrook, near Monmouth | do. |
| Houses and Shops, King-street, Cork | Dobbin, Ogilvie, & Co. Ltd. | A. Hill, Archt. 22, George's-street, Cork | do. |
| Two Semi-detached Houses, Crossgates, near Leeds | ,, | P. Robinson, Archt. 72, Albion-street, Leeds | do. |
| Fifty Houses, Fort Estate, Lisburn | ,, | J. Allen, Solicitor, Lisburn | do. |
| Offices, Ann-street, Belfast | Jas. Lipsey & Co. | W. J. Moore, Archt. White-hall-bldgs. Ann st. Belfast | do. |
| Rebuilding Licensed Premises, Stanhope and Wall-street, Belfast | H. Lavery | do | do. |
| Additions to Licensed Premises, Great George-street and North Queen-street, Belfast | P. & M. Bradley | do. | do. |
| Three Houses, St David's Hill, Exeter | ,, | Jas. Crocker, Archt. Exeter | do. |
| Mission Chapel, &c. Tiverton Junction | ,, | do. | do. |
| Shop, High-street, King's Lynn | Mrs. Gates | L. F. Eagleton, Archt. Bank-chambers, King's Lynn | do. |
| Four Cottages, Salter Gate, Chesterfield | ,, | W. Glossop, Archt. 20, Cavendish-st. Chesterfield | do. |
| Two Houses, Hasland-lane, Chesterfield | ,, | do, | do, |
| Houses, Heswall, Cheshire | ,, | C. B. Taylor, 20, St. Thomas-bldgs. Liverpool | do. |
| Houses, Oxton, Berwickshire | ,, | J. R. & E. E. Pearson, Archts 24, Castle-st. Edinburgh | do. |
| House, Gullane, N.B. | Rev. A. W. Williamson | do. | do. |
| Chapel, Trealow, Rhondda Valley | ,, | J. Rees, Archt. Hillside, Pentre | do. |
| House, Diamond-street, Saltburn-by-Sea | ,, | W. Peachley, Archt. 3, Amber-st. Saltburn-by-Sea | do. |
| Fourteen Cottages, nr. Hunslet (Leeds) Station | ,, | John E. Leak, Archt. Hunslet, near Leeds | do. |
| Church, Bournemouth | ,, | Boreham & Morton, Surv. Sunderland | do. |
| Warehouse, Furness Paper Mills, Ulverston | S. Pollitt & Co. | Settle & Farmer, Archts. County-square, Ulverston | do. |
| Three Houses, Bloomfield, Ireland | ,, | J. Dempster, Finvoy, Bloomfield | do. |
| Ten Workmen's Houses, nr. Llandaff Station | ,, | J. Williams, Archt. High-street, Cardiff | do. |
| *Superstructure of Buildings at Asylum | Leicester Borough Asylum | G. T. Hine, 35, Parliament-street, S.W. | do. |
| *Painting, &c. | War Dept. | R. E. Office Headquarters, Aldershot | do. |

## PUBLIC APPOINTMENTS.

| Nature of Appointment. | By whom Advertised. | Salary. | Application to be in. |
|---|---|---|---|
| *Technical School Instructors (Two) | Gov. of Lagos, West Africa | 300*l.* per an.; free quarters, travelling expenses, &c. | May 23 |
| *Clerk of Works | Basingstoke Guardians | 1*l.* 3*s.* per week | May 24 |
| *Temporary Clerk of Works | Herne Bay U.D.C. | 2*l.* 10*s.* per week | May 26 |
| *Road Foreman | Stoke-on-Trent Corp. | 2*l.* per week | May 27 |

***Those marked with an asterisk (*) are advertised in this Number.*** ***Competitions, p.*** iv. ***Contracts, pp.*** iv. vi. & viii. ***Public Appointments, pp.*** xvii. xviii. & xx.

By BANKS & SON (at Folkestone).

Folkestone, &c., Kent.—"Ashley Grange" and 25a. 0r. 31p., f. ..... £12,600

May 13.—By G. B. SMALLPEICE.

Crouch Hill.—No. 77, r. 120*l.*, with four plots of land, f. ..... 4,100
Highcroft-rd., f.g.r. 15*l.*, reversion in 77 yrs. ..... 490
Ashley-rd., f.g.r. 80*l.*, reversion in 77 yrs. ..... 2,380
Shaftesbury-rd., f.g.r. 35*l.*, reversion in 77 yrs. ..... 1,295
Regent's Park.—Tichfield-ter., i.g.r. 21*l.*, u.t. 23 yrs., g.r. 10*l.* 10s. ..... 120

By W. A. BLAKEMORE.

Hackney.—12 to 16, Ada-pl. and 10 to 14, Marian-sq., u.t. 13 yrs., g.r. 25*l.* ..... 650
90, 92, and 94, Balcorne-st., u.t. 45 yrs., g.r. nil. 810
3, 4, 5, and 5A, Church-path, u.t. 82½ yrs., g.r. 16*l.* ..... £735
38, 40, and 42, Lauriston-rd., u.t. 56 yrs., g.r. 15*l.*, r. 36*l.* ..... 790
2, 4, 6, 8, and 22, Holcroft-rd., u.t. 45 yrs., g.r. 15*l.* 10s. ..... 1,205
1 and 3, Holcroft-rd., f., r. 60*l.* ..... 995
11 to 19 (odd), Percy-rd., u.t. 43 yrs., g.r. 16*l.* .. 620
21 to 27 (odd), Percy-rd., u.t. 62½ yrs., g.r. 14*l.* .. 605
4 to 16 (even), St. Thomas-rd., u.t. 33 yrs., g.r. 17*l.*, r. 271*l.* ..... 2,700

By LEOPOLD FARMER.

Kilburn.—27, 29, 73, and 75, Denmark-rd., u.t. 61½ yrs., g.r. 21*l.*, r. 122*l.* ..... 1,105
12, Albert-rd., u.t. 61½ yrs., g.r. 5*l.* 5s., r. 30*l.* .. 265
35, Albert-rd., u.t. 64½ yrs., g.r. 5*l.*, r. 30*l.* ..... £275
5, Albert-gardens, u.t. 64½ yrs., g.r. 6*l.*, r. 32*l.* .. 275
230, Kilburn-lane, u.t. 79½ yrs., g.r. 8*l.* 10s., r. 55*l.* ..... 700
Brondesbury.—Willesden-lane, "Brondesbury House," and about 3 a., u.t. 62½ yrs., g.r. 80*l.* .. 2,350

***Contractions used in these lists.***—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; yd. for yard, &c.

## PRICES CURRENT OF MATERIALS.

| TIMBER. | | |
|---|---|---|
| Greenheart, B.G. | ton | 8/0/0 0/0/0 |
| Teak, E.I. | load | 9/0/0 14/0/0 |
| Sequoia, U.S.ft.cu. | | 1/9/0 1/11/0 |
| Ash, Canada, load | | 3/5/0 4/10/0 |
| Birch, do. | | 2/10/0 4/7/6 |
| Elm, do. | | 4/-/0 5/0/0 |
| Fir, Dantsic, &c. | | 1/4/0 3/4/0 |
| Oak, do. | | 2/2/0 3/2/0 |
| Canada | | 3/15/0 5/0/0 |
| Pine, Canada red | | 0/0/0 0/0/0 |
| Do. yellow | | 2/5/0 4/5/0 |
| Lath, Dantsic, fath | | 4/10/0 5/10/0 |
| St. Petersburg | | 5/0/0 6/10/0 |
| Wainscot, Riga, &c., log | | 5/0/0 6/10/0 |
| Odessa, crown | | 5/0/0 6/10/0 |
| Deals, Finland 2nd & 1st std 100 | | 8/5/0 8/15/0 |
| Do. 4th & 3rd | | 8/5/0 8/15/0 |
| Do. Riga | | 6/15/0 7/15/0 |
| St. Petersburg, 1st yellow | | 10/5/0 12/15/0 |
| Do. 2nd yellow | | 9/5/0 10/15/0 |
| Do. white | | 8/15/0 10/15/0 |
| Swedish | | 9/5/0 15/15/0 |
| White Sea | | 9/15/0 16/5/0 |
| Canada, Pine 1st | | 19/5/0 25/5/0 |
| Do. do. 2nd | | 13/15/0 16/5/0 |
| Do. do. 3rd, &c. | | 6/5/0 9/15/0 |
| Do. Spruce, 1st | | 10/10/0 12/0/0 |
| Do. do. 3rd and 2nd | | 8/0/0 9/0/0 |
| New Brunswick | | 7/0/0 8/0/0 |
| Battens all kinds | | 5/0/0 18/0/0 |
| Flooring boards, sq., 1 in. prep. 1st | | 9/6 17/9 |
| Do. 2nd | | 8/0 13/6 |
| Other qualities— | | 6/0 7/0 |
| Cedar, Cuba, ft. | | /4 /4½ |
| Honduras, &c. | | /3½ /4½ |
| Mahogany, Cuba | | /5½ /7 |
| St. Domingo, cargo av. | | /4½ 0/1/3 |
| Mexican, do. do. | | /3½ /4 |
| Tobasco, do. do. | | /4 /6½ |
| Honduras, do. | | /4 /6 |
| Box, Turkey, ton | | 4/0/0 15/0/0 |
| Rose, Rio | | 7/0/0 14/0/0 |
| Bahia | | 6/0 0 12/0/0 |
| Satin, St. Doming. | | 0/0/5 0/1/0 |

| TIMBER *(continued)*. | | |
|---|---|---|
| Satin, Porto Rico | 0/0/6 | 0/1/6 |
| Walnut, Italian | 0/0/3 | 0/0/7 |
| **METALS.** | | |
| Iron—Pig, in Scotland ton | 2/7/7½ | 0/0/0 |
| Bar, Welsh, in London | 5/15/0 | 5/17/6 |
| Do. do. at works in Wales | 5/10/0 | 5/12/6 |
| Do. Staffordshire, in London | 6/5/0 | 7/10/0 |
| COPPER—British cake and ingot | 55/10/0 | 56/0/0 |
| Best selected | 56/5/0 | 56/15/0 |
| Sheets, strong | 61/10/0 | 62/0/0 |
| Chili bars | 51/8/9 | 0/0/0 |
| YELLOW MTL. lb. | 5d. | 5¼d. |
| LEAD—Pig Spanish ton | 13/17/6 | 0/0/0 |
| English com. bands | 14/2/6 | 0/0/0 |
| Sheet, English 6 lbs. per sq. ft. and upwards | 15/2/6 | 0/0/0 |
| Pipe | 15/12/6 | 0/0/0 |
| ZINC—English sheet ton | 23/0/0 | 0/0/0 |
| Vieille Montagne | 23/10/0 | 0/0/0 |
| Spelter | 19/2/6 | 19/5/0 |
| TIN—Straits | 66/6/3 | 0/0/0 |
| Australian | 66/15/0 | 67/0/0 |
| English Ingots | 69/0/0 | 71/0/0 |
| Banca | 61/0/0 | 0/0/0 |
| Billiton | 59/15/0 | 60/0/0 |
| **OILS.** | | |
| Linseed ton | 17/5/0 | 0/0/0 |
| Cocoanut, Cochin | 27/15/0 | c/o/o |
| Do. Ceylon | 22/0/0 | 0/0/0 |
| Palm, Lagos | 21/15/0 | 0/0/0 |
| Rapeseed, English pale | 27/10/0 | 0/0/0 |
| Do. Brown | 26/0/0 | 0/0/0 |
| Cottonseed ref. | 14/5/0 | 15/5/0 |
| Oleine | 13/10/0 | 14/10/0 |
| Lubricating U.S. | 0/5/3 | 0/7/6 |
| Do. Black | 0/5/0 | 0/6/6 |
| TAR—Stockholm barrel | 1/5/0 | 0/0/0 |
| Archangel | 0/12/6 | 0/0/0 |
| Turpentine | 26/0/0 | 0 0/0 |

## TENDERS.

[Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursdays.* N.B.—We cannot publish Tenders unless authenticated by the name and address of the sender; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is given, nor any list in which the lowest Tender is under £100, unless in some exceptional cases and for special reasons.]

ABERDEEN.—Accepted for erecting a new hydro, Murtle, Aberdeen. Mr. R. G. Wilson, architect, 181A, Union-street, Aberdeen:—

*Masonry.*—John Morgan, Aberdeen
*Carpentry*—Leslie & Hay, Aberdeen
*Slating.*—A. Kinkaid, Cults, Aberdeen
*Plastering.*—Geo. Leith, Aberdeen
*Plumbing.*—A. B. Robertson, Aberdeen
*Painting.*—Edward Copeland, Aberdeen
} £9,000

Electric lighting, heating, &c., not included in above.

ALDERSHOT.—For the erection of six houses, for Mr. T. Smith Hughes. Messrs. Friend & Lloyd, architects and surveyors, Aldershot:—

| | | | |
|---|---|---|---|
| W. Garland | £1,875 | Martin Wells & Co. | £1,770 |
| W. L. Edgoose | 1,797 | F. Knight (accepted) | 1,749 |

[All of Aldershot.]

ANERLEY.—Accepted for alterations, &c., to Assembly Rooms, Jasmine-grove, in adoption for Penge Petty Sessional Court, for Mr. J. Perks. Messrs. G. Elkington & Son, architects:—

Henry Leney, Penge ..... £593

BANGOR (Wales).—For the erection of a residence, Pendre, for Mr. E. Jones. Mr. R. Davies, architect, Bangor:—

| | | | |
|---|---|---|---|
| R. & J. Williams | £1,300 | Watkin Jones, Bangor* | 1,145 |
| Jones & Williams | 1,207 | | |

* Accepted.

BLACKPOOL.—For the erecti on of business premises, Foxhall road and York-street, for Messrs. Bickerstaffe, Ltd. Messrs. Garlick & Sykes, architects, 22, Birley-street, Blackpool:—

| | | | |
|---|---|---|---|
| Wm. Ainsworth | £5,800 0 0 | Cardwell Brothers | £5,496 10 0 |
| Dryland & Preston | 5,733 14 0 | J. M. Fletcher | 5,478 0 0 |
| W. H. Dean & Sons | 5,722 0 0 | R. W. Bonny | 5,454 2 6 |
| Thos. Hartley | 5,661 2 3 | Fielding & Sons* | 5,401 2 6 |
| Blackburn & Hastings | 5,654 18 0 | Kertoot & Fryer | 5,259 18 2 |
| Parkinson & Sons | 5,558 0 6 | Butterworth & Sons | 5,299 17 4 |
| | | Thorgill & Robson | 4,847 0 0 |

* Accepted.

[All of Blackpool.]

*Ironwork.*

| | | | |
|---|---|---|---|
| Butler & Co.'s Trustees, Leeds | £1,529 15 0 | | |
| Foster & Son, Preston (accepted) | 1,167 6 10 | | |

BOVEY TRACEY.—For work to be done at Bovey Tracey, for the Bovey Pottery Company, Limited. Mr. W. G. Couldrey, architect, Paignton. Quantities by Mr. Vincent Cattermole Brown, of Paignton:—

| | | | |
|---|---|---|---|
| S. Blowey | £2,920 0 | Webber & Sons | £1,955 0 |
| E. P. Bovey | 2,490 0 | E. Westlake | 1,939 10 |
| T. Brown | 2,370 0 | Pillar | 1,900 10 |
| W. G. S. Mardon | 2,348 0 | Zeally | 1,800 0 |
| R. F. Yeo | 2,035 0 | M. Bridgman, Paignton (accepted) | 1,782 0 |
| J. Turner | 2,010 0 | | |

BUSHEY.—For the erection of new mission hall at Clay Hill, for the committee. Mr. A. R. Barker, architect. Quantities by Mr. Chas. G. Vinall:—

| | | | |
|---|---|---|---|
| Roberts | £1,827 | Kirby & Sons | £1,481 |
| Matthews | 1,790 | W. Bailey | 1,450 |
| Bell | 1,734 | Whitehouse | 1,400 |
| Dupont | 1,495 | | |

CROYDON.—For alterations and additions to the Board schools, Beulah-road, providing additional accommodation in the boys' and girls' departments, making new cookery-room, and laying-out additional playgrounds, for the Croydon School Board. Mr. Robert Ridge, architect, 12, Kaffarine-street, Croydon. Quantities by Mr. Richard Peters, Wool Exchange, E.C.:—

| | | | |
|---|---|---|---|
| J. & C. Bowyer | £4,791 | F. W. Sedgwick | £4,249 |
| W. Akers & Co. | 4,745 | E. J. Saunders | 4,200 |
| J. Smith & Sons | 4,459 | E. P. Bulled & Co.* | 4,066 |
| Huntley Bros. | 4,284 | | |

[All of Croydon.]

* Accepted, subject to the approval of the Education Department.

CHELMSFORD.—For a pair of villas to be built in King Edward's-avenue. Mr. Rd. Mawhood, architect, Chelmsford:—

| | | | |
|---|---|---|---|
| E. West | £1,000 | W. Samms | £857 |
| W. Fincham | 897 | J. Gowers (accepted) | 820 |

[All of Chelmsford.]

CYMMER (Wales).—For the completion of council offices, for the Glyncorrwg Urban District Council. Mr. G. F. Lambert, architect, Bridgend:—

| | | | |
|---|---|---|---|
| James Hughes | £720 0 | J. Jones | £519 15 |
| Watkin Lewis | 550 0 | J. W. Jackson, Porthcawl* | 512 0 |
| W. Francis | 539 0 | | |

* Accepted subject to the approval of the sureties.

FARINGDON.—Accepted for the erection of a post office. Messrs. William Drew & Sons, architects, Swindon:—

J. Williams, Swindon ..... £960

FARINGDON.—Accepted for erecting the "Eagle Tavern" public-house, Little Coxwell, near Faringdon, Berks, for Messrs. R. B. Bowby & Co., North Wilts Brewery, Swindon. Messrs. W. Drew & Sons, architects, Swindon:—

J. Willis, Little Coxwell ..... £860

FLIMBY (Cumberland).—Accepted for additions to school buildings, for the School Board. Messrs. Scott & Co., architects, Workington:—

Harry Finnion, Flimby ..... £329 15

HANLEY.—For rebuilding the "Quiet Woman Inn," Broad-street, Hanley, for Messrs. Mayers Bros. Mr. John T. Brealey, architect, Hanley and Leek. Quantities by architect:—

| | | | |
|---|---|---|---|
| Geo. Ellis | £1,204 0 | C. Cornes & Sons | £1,025 0 |
| Thos. Chatfield | 1,054 8 | Thos. Godwin, Hanley (accepted) | 1,019 0 |
| E. Booth | 1,028 0 | | |

KETTERING.—For the erection of a new factory, Connaught street and Avondale-road, Kettering, for Messrs. Wilson & Watson Mr. H. A. Cooper, architect, Kettering:—

| | | | |
|---|---|---|---|
| H. Martin | £6,915 | C. & F. Henson | £5,960 |
| Bryan & Son | 6,635 | C. Andrew | 5,955 |
| Freeman & Sons | 6,568 | H. Judkins | 5,885 |
| J. W. Hart | 5,992 | Smith, Edmonds, & Co., Kettering (accepted) | 5,822 |
| Garrett | 5,989 | | |

KING'S LYNN.—For rebuilding house, shop, and business premises, 17, High-street, King's Lynn. Mr. H. J. Green, architect, Norwich:—

| | | | |
|---|---|---|---|
| Kerridge & Shaw | £1,494 7 | W. H. Brown | £1,371 0 |
| Bardell Bros. | 1,489 0 | Collins & Barber, Downham Market* | 1,330 0 |
| Robert Dye | 1,412 0 | | |
| Read, Wildbur, & Co., Ltd. | 1,398 14 | | |

* Accepted conditionally.

KING'S LYNN.—For work at No. 112, High-street, King's Lynn (rebuilding house, shop, and business premises) for Mrs. M. A. E. Howard. Mr. H. J. Green, architect, Norwich:—

| | | | |
|---|---|---|---|
| Kerridge & Shaw | £1,168 0 0 | Collins & Barber | £1,165 0 0 |
| Robert Dye | 1,133 0 0 | Read, Wildbur & Co., Ltd., King's Lynn* | 1,035 0 0 |
| Bardell Bros. | 1,129 0 0 | | |
| W. H. Brown | 1,120 17 6 | | |
| Arthur Collison | 1,082 0 0 | | |

* Accepted conditionally.

KINGSTON-ON-THAMES.—Accepted for supplying and fixing low-pressure hot-water apparatus for new art and technical schools, Kingston-on-Thames:—

J. Jones & Sons, 42, Farringdon-street, E.C. ..... £215 15

LANGLEY BURRELL (Wilts.).—For restoration of nave and aisle of the parish church, in two separate tenders, for the Restoration Committee. Mr. Harold Brakspear, architect, Corsham, Wilts. Quantities by Messrs. Amor & Underwood, Bath:—

| | For Nave. | For Aisle. |
|---|---|---|
| Hayward & Wooster | £498 | £319 |
| E. Chancellor | 478 | 305 |
| Downing & Rudman (accepted) | 461 | 284 |

LEEK.—For erecting ten terrace houses, Ashbourne-road, for Mr. Wm. Goostrey. Mr. John T. Brealey, architect, Hanley and Leek. Quantities by architect:—

| | | | |
|---|---|---|---|
| James Heath | £5,400 0 0 | S. Salt | £4,727 10 0 |
| C. Cornes & Sons | 5,359 0 0 | Heath & Lowe, Leek* | 4,413 15 6 |
| J. Fielding | 5,047 15 6 | | |
| T. Grace | 4,834 0 0 | | |

* Accepted.

LONDON.—Accepted for providing and fixing low-pressure hot-water apparatus, with improved radiators, for St. Peter's new church, Hornsey. Mr. James Brooks, architect, 35, Wellington-street, Strand, W.C.:—

J. Jones & Sons, 42, Farringdon-street, E.C. ..... £127 18

LONDON.—For erecting new stables, Windmill-street, Lambeth, for Mr. J. G. Skeffington. Mr. T. Gibbs Thomas, architect, King William-street, Charing Cross, W.C.:—

| | | | |
|---|---|---|---|
| John Appleby | £457 | Williams | £432 |

LONDON.—For erecting a boiler house and chimney shaft in Lambeth-walk, S.E., for Messrs. Bennett, Sons, & Co., Ltd. Mr. J. A. Woodward, architect, 69, Kennington-oval, S.E. Quantities by Mr. Walter Woodward:—

| | | | |
|---|---|---|---|
| Ansell | £990 | Parsons | £847 |
| John Appleby | 980 | Simmons | 813 |
| Marsland | 942 | | |

LONDON.—For completing Clifton-buildings, Brixton, for Mr. A. J. Sanderson. Mr. E. C. Homer, architect, 35, Bucklersbury, E.C.:—

| | | | |
|---|---|---|---|
| Brown | £6,666 | Courtney & Fairbairn* | £5,655 |
| Minter | 5,730 | | |

* Accepted.

LONDON.—Accepted for additions to the receiving workhouse, Bear-yard, Lincoln's Inn-fields, for the Guardians of the Strand Union. Messrs. W. S. Cross & Kekwick, architects, 18, Outer Temple, Strand:—

T. G. Sharpington, Nunhead ..... £3,998

LONDON.—For alterations to premises in High-road, Lewisham, for Messrs. James Willing & Co., Limited. Messrs. W. S. Cross & Kekwich, architects, 18, Outer Temple, Strand:—

| | | | |
|---|---|---|---|
| T. G. Sharpington | £797 | Love & Co., Exeter-street* | £640 |
| J. Jarvis & Sons | 756 | | |

* Accepted.

LONDON.—For repairs, &c., at Fishmongers and Poulterers' Almshouses, Wood Green, N. Mr. H. Dyball, architect, 35, Bucklersbury, E.C.:—

| | | | |
|---|---|---|---|
| Irwin | £607 | Willson | £508 |
| Weibking & Sons | 415 | Whitbread | 285 |
| J. Mills | 370 | Willmott | 240 |

LONDON.—For the erection of cottages, offices, caretaker's rooms, &c., at Neate-street, Camberwell, S.E., for Mr. E. G. Quinn. Mr. Arthur Garnar, architect, 66, Oakhurst-grove, East Dulwich, S.E.:—

| | | | |
|---|---|---|---|
| Geo. Parker | £1,790 | R. & E. Evans | £1,598 |
| Canning & Mullins | 1,640 | Lawrence & Co.* | 1,500 |

* Accepted.

MOTHERWELL (N.B.).—Accepted for the execution of causeway works, for the Commissioners. Mr. Jas. M'Callum, engineer, Town Hall, Motherwell:—

Patrick M'Laggart, Motherwell ..... £1,394 19 9

NEATH.—For the construction of concrete service reservoir, &c., for the Rural District Council. Mr. W. E. Clason Thomas, C.E., Post Office Chambers, Neath:—

| | | | |
|---|---|---|---|
| Bennett Bros. | £950 15 2 | Ernest E. Jones | £243 11 8 |
| Beynon & Co. | 245 0 0 | Geo. Harris, Cilfriw* | 216 9 3 |

Tenders by schedule of prices.

* Accepted.

NEWMARKET (Suff.lk).—For laying, jointing, &c., three and a quarter miles water-pipes, &c., for the Waterworks Company, Limited. Mr. J. B. Everard, engineer, 6, Millstone-lane, Leicester:—

| | | | |
|---|---|---|---|
| T. Rowland | £4,066 8 1 | S. Mason, Lim., Cambridge (accepted) | £2,713 0 0 |
| E. Smith | 3,295 0 0 | H. H. Barry | 1,955 5 0 |

NORTH RODE (near Congleton).—For additions and alterations to the "Manor House," for Mr. E. Tootal Broadhurst. Mr. John T. Brealey, architect, Hanley and Leek. Quantities by architect:—

| | | | |
|---|---|---|---|
| G. Roylance & Co., Lim. | £1,988 | James Heath | £1,600 |
| C. Cornes & Sons | 1,800 | John Worrall | 1,566 |
| Matthew Cooke | 1,700 | Joseph Worrall | 1,530 |
| Thos. Brown | 1,625 | Thomas Grace, Leek* | 1,520 |

* Accepted.

OXFORD.—Accepted for making alterations to the "Prince of Wales" public-house, Walton-street, Oxford, and forming vaults, &c. Messrs. William Drew & Sons, architects, Swindon:—

Brucker Bros. ..... £169

OXSHOTT.—For erecting a house at Oxshott, Surrey, for Mr. Geo. Abernethy. Mr. F. G. Knight, architect:—

| | | | |
|---|---|---|---|
| Falkner | £6,753 | Messom | £5,977 |
| Colls | 6,544 | H. Hutchinson | 5,950 |
| W. Watson | 6,393 | | |

PEMBROKE DOCK.—For the following material and works for the water supply of Pembroke Dock, for the Pembroke Town Council. Messrs. Fred. Beesley & Son, engineers, Westminster:—

For the supply of 1,548 tons of cast-iron pipes, and 30 tons of special castings.

| | | | |
|---|---|---|---|
| Tredegar Iron & Coal Co., Ltd. | £8,687 2 8 | R. McLaren & Co. | £8,353 15 1 |
| Staveley Coal & Iron Co., Ltd. | 8,634 3 5 | Exors. of Chas. Jordan | 8,297 17 5 |
| D. M. Stevenson & Co. | 8,563 8 6 | D. Y. Stewart & Co. | 8,260 0 0 |
| John Abbot & Co., Ltd. | 8,514 11 9 | Bigg, Wall & Co. | 8,079 9 10 |
| Cochrane & Co. | 8,485 19 9 | J. & S. Roberts, Ltd. | 8,026 17 4 |
| Cochane, Grove, & Co., Ltd. | 8,418 18 2 | Stanton Iron Works Co., Ltd., Nottingham (accepted) | 8,002 6 7 |
| Maclarlane, Strang, & Co., Ltd. | 8,388 17 2 | R. D. Wood & Co.* | 7,995 12 0 |
| | | T. Spittle, Ltd.* | 7,995 7 0 |

* Informal.

For carting, laying, and jointing about twelve miles of pipe, supplying and fixing sluice valves, hydrants, &c., and constructing two covered service reservoirs, each holding 278,000 gallons:—

| | | | |
|---|---|---|---|
| W. Meredith | £17,005 14 2 | Jas. Dickson | £10,424 9 2 |
| Wm. Jones | 14,612 0 0 | W. Jenkins, Pontypridd (accepted) | 9,363 6 9 |
| C. Powell | 11,113 10 0 | Thos. Jones Davies (withdrawn) | 8,788 3 6 |
| B. Cooke & Co. | 10,752 0 0 | | |
| Wm. Davies | 10,747 0 0 | | |

For supplying and fixing three oil-engines and pumps, each capable of lifting 170 gallons of water per minute, to a height of 250 ft. through 1,630 yards of 12-in. rising main:—

| | | | |
|---|---|---|---|
| Hayward, Tyler, & Co. | £2,825 0 0 | Pollock, Whyte, & Waddel, Glasgow* | £1,838 10 0 |
| R. Warner & Co. | 2,460 0 0 | Fielding & Platt, Ltd. | 1,700 0 0 |
| Geo. Waller & Co. | 2,380 0 0 | Crossley Bros., Ltd. | 1,654 12 6 |
| Campbell Gas-Engine Co., Ltd. | 1,884 13 6 | | |

* Accepted.

PENGE.—Accepted alterations, &c., to 78, Beckenham-road, in adoption for branch office for London and Provincial Banking Company. Mr. A. B. Hutchins, architect, 14, Victoria-street, Westminster:—

Henry Leney, Penge ..... £355

PENGE.—For alterations and entire reconstruction of bar and lobbies to "Pawleyne Arms," Beckenham-road, for Mr. G. Upward. Messrs. Elsmore & Rutter, architects, 4, New Inn, Strand, W.C.:—

| | | | |
|---|---|---|---|
| Balaam Bros. | £1,021 | Higgs & Hill | £710 |
| Todd | 843 | Sheffield Bros. | 640 |
| Edwards | 814 | Henry Leney, Penge* | 576 |

* Accepted.

PENGE.—Additions and alterations to 21, Beckenham-road, for the London and County Banking Company. Messrs. G. Elkington & Son, architects:—

| | | | |
|---|---|---|---|
| C. Homewood | £711 12 | Henry Leney, Penge* | £585 0 |
| Syme & Duncan | 660 0 | | |

* Accepted.

PENMAENMAWR (N. Wales).—Accepted for the construction of road and erection of thirty-one cottages, for Messrs. Brundritt & Co. Mr. Richard Davies, architect, Bangor:—

Robt. G. Williams, Llanfairfechan ..... £4 500

PORT AMLWCH.—For erecting a Calvinistic Methodist chapel Mr. Richard Davies, architect, Bangor:—

| | | | |
|---|---|---|---|
| W. Williams | £2,129 | W. & O. Pritchard | £1,800 |
| Thomas & Son, Port Amlwch (accepted) | 1,935 | O. Thomas | 1,670 |
| | | H. Hughes | 1,505 |

RIPLEY.—For the Hartshay, Marehay, and Waingroves Water Supply, for the Urban District Council of Ripley, Derbyshire. Quantities supplied by the Surveyor, Mr. R. Argile, C.E., Ripley:—

*Contract No. 1.—For Supply of Cast Iron Pipes.*

| | | | |
|---|---|---|---|
| William Jones | £1,780 9 3 | Butterley Co., Ltd., Butterley Iron Works, near Derby (accepted) | £1,511 0 11 |
| Clay Cross Co. | 1,716 3 2 | | |
| Cochrane & Co. | 1,699 6 3 | | |
| Sheepbridge Coal & Iron Co., Ltd. | 1,538 17 10 | | |

*Contracts Nos. 2, 3, 4, and 5.—For Pipe-laying.*

| | | | |
|---|---|---|---|
| William Jones | £1,960 1 9 | Swindall & Moss | £1,217 0 0 |
| Walter Jowett | 1,771 16 10 | Robert Holmes & Co., Chesterfield* | 1,155 0 0 |
| James Holmes | 1,435 6 6 | | |
| H. H. Barry | 1,350 0 0 | | |

* Accepted.

*Contracts Nos. 3 and 5.—For Pipe-laying.*

Johnson & Beighton, Danesmoor, Chesterfield ..... £926 4 2

*Contracts Nos. 4 and 5.—For Pipe-laying.*

John Coupe, jun., Ripley, near Derby ..... £1,197 16 0

ST. ALBANS.—For the erection of a pair of cottages on the Gombards Estate. Mr. Percival C. Blow, architect, St. Albans and Harpenden :—

| | | | |
|---|---|---|---|
| Dunham | £610 0 | Bushell* | 449 0 |
| Sparrow | 459 10 | * Accepted. | |

ST. ALBANS.—For the erection of six cottages, Culver-road, for Mr. Nathan Bell. Mr. Percival C. Blow, architect, St. Albans and Harpenden :—

| | | | |
|---|---|---|---|
| Whibley & Jarvis | £1,304 | Bushell* | 1,225 |
| Sparrow | 1,254 | * Accepted. | |

SHOEBURYNESS.—For the erection of four cottages, Waker' ing-road, for Miss Knapping. Messrs. Burles & Harris, architects, Southend-on-Sea :—

| | | | |
|---|---|---|---|
| A. J. Harris | £850 0 | Alp & Ventris, Shoeburyness (accepted) | £809 10 |

SOUTHAMPTON.—Accepted for the erection of shop and dwelling-house in Shirley-road, for Mr. S. H. Foy. Messrs. Jurd & Sanders, architects, Southampton :—

Golding & Ansell ..... £1,350

SWINDON.—Accepted for forming new roads and putting in drains, &c., at Even Swindon, for Mr. James Morrison, J.P. Messrs. William Drew & Sons, surveyors, Swindon. Quantities by the surveyors :—

J. Williams, Swindon ..... £3,768

SWINDON.—Accepted for forming road and putting in sewer and drainage works to small-pox hospital for the Swindon and District Hospital Board. Messrs. William Drew & Sons, surveyors :—

J. Williams, Swindon ..... £362

SWINDON.—For erecting new premises in Bridge-street, for Messrs. Cole & Lewis. Messrs. William Drew & Sons, architects, Swindon :—

| | | | |
|---|---|---|---|
| J. Williams | £1,287 0 | J. Hatherley | £1,177 0 |
| W. A. Moulding | 1,280 0 | C. Williams, Swindon* | 1,200 0 |
| Flewelling & Huckson | 1,265 16 | * Accepted. | |

SWINDON. — For making additions and alterations to the Foresters Arms public-house, Fleet-street, Swindon, for Messrs. T. & J. Arkell. Messrs. William Drew & Sons, architects, Swindon :—

| | | | |
|---|---|---|---|
| J. Hatherley | £1,655 0 | A. J. Colborne | £1,376 10 |
| Flewelling & Huckson | 1,473 0 | C. Williams | 1,375 0 |

SWINDON.—Accepted for the erection of workmen's club and institute at Haydon Wick, near Swindon. Messrs. W. Drew & Sons, architects, Swindon :—

W. Chambers ..... £700

SWINDON.—For the erection of a malt-house, Belmont Brewery, Swindon, for Messrs. Godwin Bros. Messrs. William Drew & Sons, architects, Swindon :—

| | | | |
|---|---|---|---|
| F. J. Liddington | £636 0 0 | J. Williams | £493 0 0 |
| W. A. Moulding | 556 17 6 | J. Hatherley | 487 0 0 |
| Flewelling & Huckson | 555 0 0 | A. J. Colborne, Swindon (accepted) | 425 10 0 |

SWINDON.—For additions to the "True Heart Inn," Bishopstone, near Swindon, for Messrs. Godwin Bros., Belmont Brewery, Swindon. Messrs. W. Drew & Sons, architects, Swindon :—

| | | | |
|---|---|---|---|
| J. Williams | £417 0 0 | W. A. Moulding, Aldbourne* | £334 7 6 |
| Flewelling & Huckson | 355 0 0 | Herring | 325 0 0 |
| Lawrence Bros. | 352 0 0 | * Accepted. | |
| Lawrence & Co. | 335 12 6 | | |

TONBRIDGE.—For two shops and dwelling houses, Woodspring road, for Mrs. Baldwin. Mr. Hy. Elwig, architect :—

G. E. Eldridge ..... £750

TUNBRIDGE WELLS.—New dispensary, waiting, and consulting rooms, York-road, for the Friendly Societies Medical Association Mr. Hy. Elwig, architect, Tunbridge Wells :—

| | | | |
|---|---|---|---|
| J. Jarvis | £532 3 | Leney & Son | £508 19 |
| G. Grover | 511 0 | | |

WANSTEAD (Essex).—For making up Addison-road, for the Urban District Council :—

| | | | |
|---|---|---|---|
| A. W. Porter | £499 10 | Joseph Jackson | £399 0 |
| W. Griffiths | 473 0 | J. Reeves, High-road, Walthamstow, E.* | 398 0 |
| A. T. Catley | 450 0 | * Accepted. | |
| Jesse Jackson | 422 0 | | |

WESTWOOD (Notts.).—For the erection of a church, near Codnor Park, for the Building Committee. Mr. P. H. Currey, architect, Market-place, Derby. Quantities by the architect :—

| | Estimate A. | Estimate B. |
|---|---|---|
| T. Gill & Sons | £2,380 0 | £2,405 0 |
| Fisher Bros. | 3,358 0 | 2,389 0 |
| H Green & Sons | 3,017 0 | 2,125 0 |
| H. J. Robinson | 2,8 8 0 | 1,844 0 |
| W. Salt | 2,512 15 | 1,831 0 |
| F. Lee, Alfreton* | 2,280 0 | 1,700 0 |

Estimate A for complete church.
Estimate B for church with tower omitted.
* Accepted.

## TO CORRESPONDENTS.

W. E. W. (Amounts should have been stated).—J. A. B. (Below our limit).—J & M. (Amount should have been stated).—B. B., B. W., F. & G. (Too late ; next week).

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THE LARGEST STOCK OF ALL KINDS OF WOODS IN EVERY THICKNESS, DRY, AND FIT FOR IMMEDIATE USE.
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IMMOVABLE ACME
WOOD BLOCK FLOORING.
THE PERFECT FLOORING FOR ALL PURPOSES.
Seven Gold Medals, four Silver, two Bronze Medals, and Certificate of Sanitary Institute of Great Britain.
*Full Particulars and Prices on application to*
THE ACME WOOD FLOORING COMPANY, LTD.
Chief Offices and Works: Gainsborough Road, Victoria Park, London, N.E.

# PORTLAND CEMENT

ROMAN, MEDINA, PARIAN, KEENE'S, PLASTER and WHITING,

*Manufactured by* **FRANCIS & COMPANY, LIMITED.**

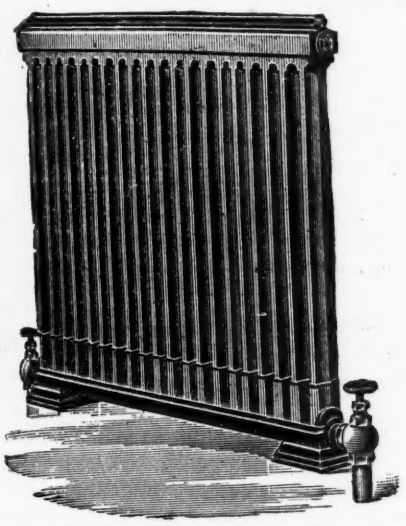
The Old Nine Elms Brand, Established 1810. Prize Medals—London, 1851; Philadelphia, 1876; Paris, 1878; Calcutta, 1883; London, 1884. Gold Medal, Paris Exhibition, 1889; Chicago, 1893. Offices and Warehouses: Bridge Foot, Vauxhall, London.—*Works: Cliffe-on-Thames.*

# VAL DE TRAVERS ASPHALTE

**(COMPRESSED OR MASTIC)**

Is the best material for Roadways, Footways, Damp Courses, Roofings, Warehouse Floors, Basements, Stables, Coach Houses, Slaughter Houses, Breweries, Lavatories, Tennis Courts, &c. *Full particulars can be obtained from the Offices,*

**HAMILTON HOUSE, BISHOPSGATE STREET WITHOUT, E.C.**



**The LATEST and BEST**

# RADIATOR

**IN THE MARKET,**

**For Hot-Water or Steam.**

PERFECT JOINT, viz., RIGHT AND LEFT SCREWED NIPPLE.

**THE THAMES BANK IRON CO., UPPER GROUND ST., S.E.,**

*Manufacturers of HEATING APPARATUS of every description.*

**THE OLDEST HOUSE IN THE TRADE.** **Illustrated Catalogue, 1s.**

PRICE LISTS FREE.

# CARBOLINEUM AVENARIUS

Regd.

## PATENT WOOD PRESERVATIVE.

**CARBOLINEUM AVENARIUS,** the well-known Wood Preservative, enters the wood by its own action, and does not require in its application any costly plant and machinery. Used by many London Vestries and Provincial Corporations for preserving wood street paving blocks.

**CARBOLINEUM AVENARIUS** entirely prevents dampness in brick and stone walls, also wet and dry rot in timber above or below ground, and is used by all the Railway Companies, and by leading Builders, Brewers, Contractors, Estate Agents, Mine Owners, &c., in the United Kingdom.

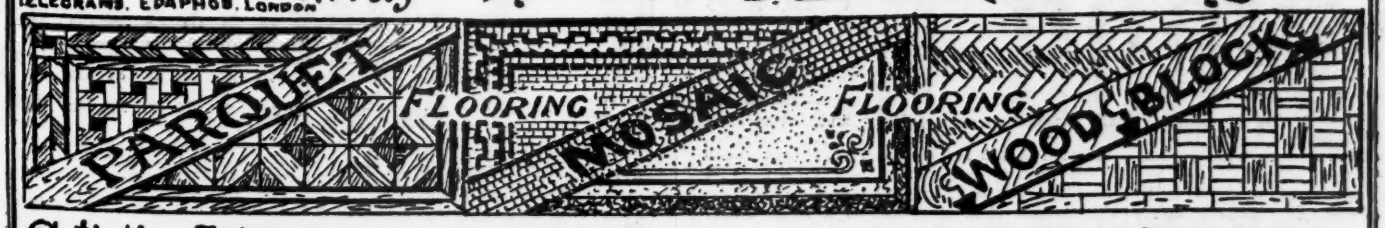
**CARBOLINEUM ONLY TO BE HAD FROM**

**PETERS, BARTSCH, & CO., DERBY.** LONDON OFFICES: **68, QUEEN ST., CHEAPSIDE, E.C.** OR THEIR AUTHORISED AGENTS.

# GEARY, WALKER & Co.

Incorporated with **The Wood Block Flooring Co.**

TELEGRAMS "EDAPHOS, LONDON"




Artistic Joinery executed from ARCHITECTS own Designs.

11, QUEEN VICTORIA STREET, LONDON, E.C. AND AT 46A MARKET ST., MANCHESTER. TELEPHONE No. 15,074

**The Subscription List will open on Tuesday, 24th May, and will close on or before Thursday, May 26th, for Town and Country.**

# J. TYLOR & SONS, LTD.

*Incorporated under the Companies Acts, 1862 to 1893.*

## SHARE CAPITAL - - £200,000,

DIVIDED INTO

| | |
|---|---|
| **10,000 5 per cent. Cumulative Preference Shares of £10 each ... ...** | **£100,000** |
| **10,000 Ordinary Shares of £10 each ... ... ... ... ... ... ... ...** | **£100,000** |
| | **£200,000** |

The Articles of Association provide that no Debentures secured by any Mortgage or charge on the property and undertaking of the Company can be created without resolutions authorising them passed at separate meetings of both the Preference and Ordinary Shareholders.

3,300 Preference Shares and 7,500 Ordinary Shares will be allotted, fully paid, to the Vendors in part payment of the purchase-money, and the remaining 2,500 Ordinary Shares will be retained for future issue, should more capital be required.

## ISSUE OF 6,700 5 PER CENT. CUMULATIVE PREFERENCE SHARES OF £10 EACH,

Ranking as to Capital and Dividend in priority to the Ordinary Shares of the Company.

**Subscriptions are invited for the above-named Preference Shares at par, payable as follows:—**

| | |
|---|---|
| **On Application ... ... ... ...** | **£1** |
| **On Allotment... ... ... ... ...** | **£4** |
| **On June 30th, 1898 ... ... ...** | **£5** |
| | **£10** |

The Dividend will be paid half-yearly—viz., on January 1st and July 1st, and the first payment will be made on the 1st of January, 1899.

**DIRECTORS.**

WILLIAM HENRY TYLOR, 2, Newgate-street, London, E.C. (Chairman).
J. G. MAIR RUMLEY, M.Inst.C.E. (Director of Babcock & Wilcox, Ltd.), 43, Palace-court, London, W.
WALTER B. H. DRAYSON, 2, Newgate-street, London, E.C.
PHILIP BRIGHT, Assoc.Mem.Inst.C.E., 2, Newgate-street, London, E.C.

**Bankers.**—Messrs. BARCLAY & COMPANY, Ltd., 54, Lombard-street, London, E.C., and Branches.

**Solicitors.**—Messrs. H. & G. KEITH, 43, Chancery-lane, London, W.C.

**Brokers.**—Messrs. SCRUTTON & SON, 75, Old Broad-street, London, E.C.

**Auditors.**—Messrs. COOPER BROTHERS & CO., George-street, Mansion House, London, E.C.

**Secretary.**—THOMAS ALLSOP.

**Registered Office.**—2, NEWGATE STREET, LONDON, E.C.

## PROSPECTUS.

The Company is formed for the purpose of acquiring, as a going concern, the business of J. Tylor & Sons, Limited, established over a century, and carried on at 2, Newgate-street, London; Belle Isle, King's Cross, London; and Pitt-street, Sydney, New South Wales, as Hydraulic and Sanitary Engineers, and Brass and Iron Founders, &c.

The Company has agencies in India, South Africa, Japan, South America, Spain, and Italy, and is on the list of contractors to the following Government Departments:—War Office, Royal Engineers, Admiralty, India Office, and the Crown Agents for the Colonies, with which departments it does an important business.

The accounts of the Old Company have been regularly audited by Messrs. Cooper Brothers & Co., Chartered Accountants, who certify as follows:—

14, George-street, Mansion House, London, E.C.

April 28th, 1898.

We have examined the books of J. Tylor & Sons, Limited, for the seven years ending the 31st March, 1898.

We have acted as Auditors of the Company since its formation in 1890.

We certify that the average annual net profit has been:—

| | | |
|---|---|---|
| For the last seven years ... ... ... ... | £12,771 | per annum. |
| For the last five years ... ... ... ... | £13,315 | ,, |
| For the last three years ... ... ... ... | £13,426 | ,, |
| And for the year ending 31st March, 1898 ... | £13,830 | |

The above profit is arrived at before charging Directors' and Managing Directors' remuneration and interest on Debentures, but after charging depreciation on the plant, machinery, patterns, and patents.

COOPER BROTHERS & CO.
Chartered Accountants.

As the Debentures are being paid off by the Old Company, and as the sum of £5,000 only is required to pay Preference Interest, the above figures show a large margin available for dividend on the Ordinary Shares, and for a Reserve Fund.

The New Company acquires the Freehold and Leasehold Premises, Plant, Machinery, Tools, Stock-in-trade, Goodwill, Patents, Patterns, Trade Marks, Drawings, and entire Assets of the Business, including Book Debts and Cash at Bankers as from the 31st day of March, 1898, and undertakes to pay and discharge the current liabilities of the Old Company existing at that date, and amounting to £8,817 4s. 11d.

The assets to be acquired are as follows:—

| | | | |
|---|---|---|---|
| (A) The freehold land and buildings and the fixed and loose plant, machinery and patterns at Belle Isle, King's Cross, London, valued by Messrs. Fuller, Horsey, Sons & Cassell (whose report is given below) at ... ... ... ... ... ... ... ... ... ... ... | £57,224 | 0 | 0 |
| (B) Stock-in-trade and Stores of Metals and Materials (taken at cost price) as per balance sheet of March 31st, 1898... ... ... | £33,187 | 15 | 5 |
| (C) Book Debts, Cash in Hand, Bills Receivable, &c., as per balance sheet of March 31st, 1898 ... ... ... ... ... ... ... ... ... | £32,656 | 15 | 1 |
| | £123,068 | 10 | 6 |

These figures are exclusive of the Leasehold Premises, Plant, and Fixtures at 2, Newgate-street, the valuable Goodwill, English and Foreign Patents, Trade Marks, and Drawings, which are also included in the consideration for the purchase-money.

Messrs. W. H. Tylor, W. B. H. Drayson, and Philip Bright, who were Directors of the Old Company, and will hold more than three-fourths of the Ordinary Shares in the New Company, and who have been actively engaged in the business for the following periods: Mr. W. H. Tylor, 40 years; Mr. W. B. H. Drayson, 26 years; and Mr. Philip Bright, 13 years, will act in conjunction with Mr. J. G. Mair Rumley, M.Inst.C.E., as Directors of the New Company, which will be conducted on the same lines and with the same staff (the principal Members of which are Shareholders) as the Old Company.

MESSRS. FULLER, HORSEY, SONS & CASSELL'S REPORT.

FULLER, HORSEY, SONS & CASSELL,
Auctioneers, Valuers, and Surveyors of Mills and Manufactories,
Plant and Machinery, Wharves and Warehouses.
11, Billiter-square, London, E.C., 26th January, 1898.

TO THE DIRECTORS OF J. TYLOR & SONS, LIMITED,
Gentlemen, 2, Newgate-street, London, E.C.

In accordance with your instructions, we have attended at your Works, BELLE ISLE, YORK ROAD, KING'S CROSS, and have made a careful survey and Valuation of same, and an inspection of the Fixed Plant and Machinery, Loose Tools, and Patterns.

The Property, which we understand to be Freehold, and subject to neither Tithe Rate nor Land Tax, occupies a total ground area of nearly two acres.

The Buildings are of recent erection and substantial construction, and include—Main Engineering Works, 284 feet by 102 feet, with Engine and Boiler Houses, Water Tower and Chimney Shaft, 140 feet high; extensive Iron and Brass Foundries, with Core Making and Dressing Shops, Pattern Makers' and Plumbers' Shops; Fireproof Pattern Stores; Warehouse, with Show Rooms and Offices, 158 feet by 33 feet, Cottage, Stables, &c.

The Plant and Machinery includes the necessary Machine Tools for the manufacture of Hydraulic and Sanitary Fittings and Appliances, Water Meters, Valves, Pumps, and other products of which your Company make a speciality. They are mostly by the best makers, and from our inspection we are enabled to certify that they are in good working order.

We are of opinion that the fair value as a going concern of the above-mentioned Freehold Engineering Works, together with the fixed and loose Plant, and Machinery, and Patterns, is the sum of

Fifty-seven thousand two hundred and twenty-four pounds (£57,224).

These figures are exclusive of any value for Stock, Stores, Work in progress, Patents, Book Debts, Drawings, or Goodwill.

We are, Gentlemen,
Yours faithfully,
(Signed) FULLER, HORSEY, SONS & CASSELL.

The purchase price has been fixed at the sum of £175,000, payable by the allotment to the Vendors, who are the Old Company, of 7,500 Ordinary Shares of £10 each, 3,300 5 per cent. Cumulative Preference Shares of £10 each, and £67,000 in Cash (out of which they will pay off the Debentures amounting to £37,000).

The following Contract has been made:—

An Agreement dated the 12th day of May, 1898, between J. Tylor & Sons, Limited, therein called the Old Company, and Philip Bright its liquidator of the one part, and J. Tylor & Sons, Limited, therein called the New Company, of the other part, being the agreement for sale and purchase of the business.

The other Contracts which will be assumed by the Company are only of the ordinary trade character, and subscribers will be held to have had notice thereof, and to have waived their right to be supplied with particulars of such Contracts.

Application will be made in due course for an official quotation of the Preference Shares on the London Stock Exchange.

The Certificate of Messrs. Cooper Brothers & Co., and the report and valuation of Messrs. Fuller, Horsey, Sons & Cassell, together with copies of the Memorandum and Articles of Association of the Company, and of the above-mentioned agreement for sale and purchase, can be seen at the offices of the Solicitors to the Company.

In cases where no allotment is made, the deposit will be returned in full; and where the number of Shares allotted is less than the number applied for, the balance of the deposit will be applied towards the payment due on allotment.

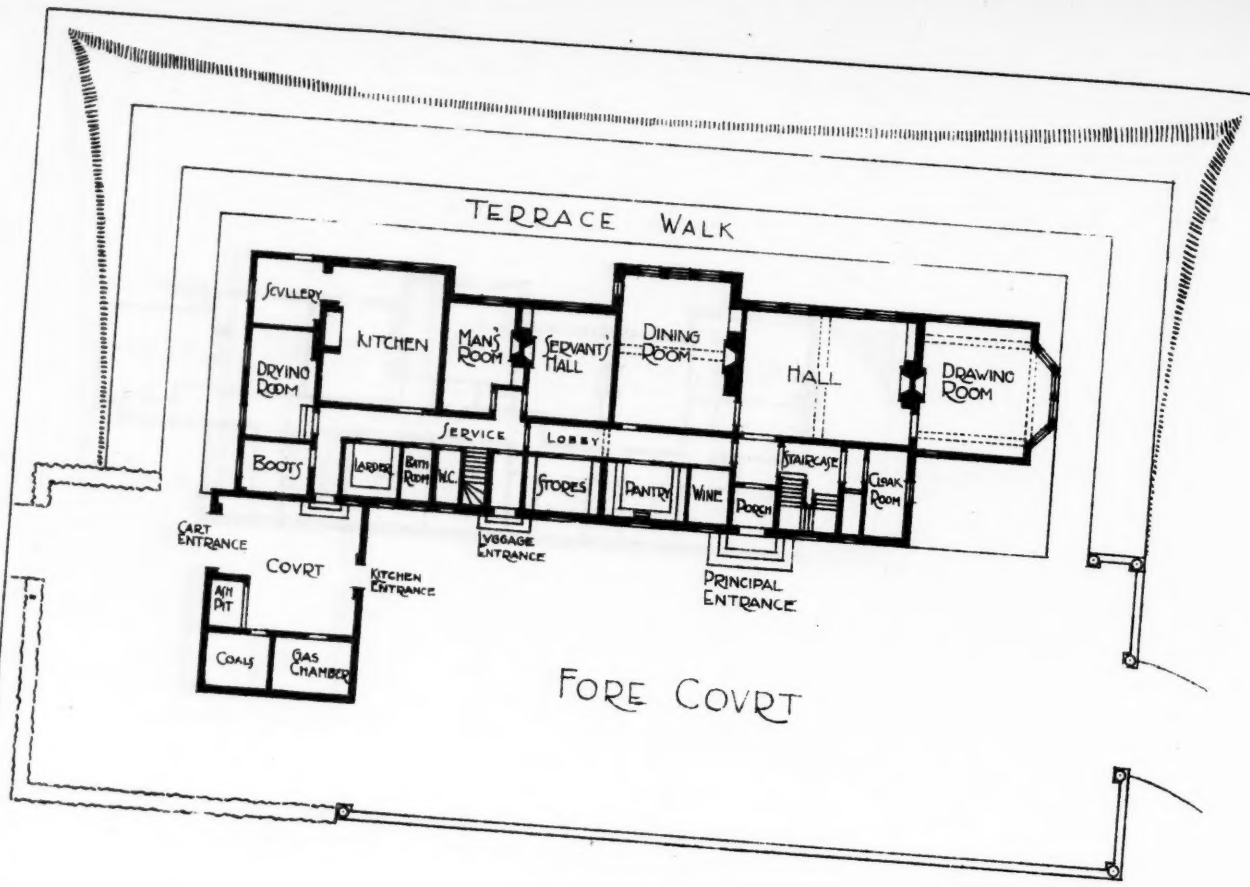
Application for the Preference Shares must be made on the form accompanying the Prospectus, and forwarded, with a remittance for the amount of the deposit, to the Bankers of the Company.

Prospectuses and Forms of Application may be obtained from the Bankers, or Solicitors, or at the Offices or Works of the Company.

The Old Company will pay all the costs and expenses of the formation of the New Company up to allotment.

No part of the present issue has been underwritten, and no promotion money has been, or will be, paid in connexion therewith.

May, 1898.




SHOOTING LODGE, MIEFIELD, KIRKCUD IGHTSH

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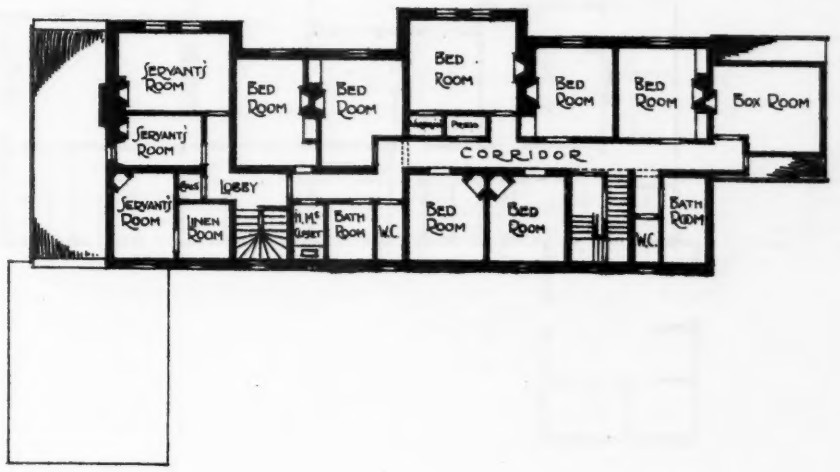

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KIRKCUD IGHTSHIRE.—Mr. J. K. Hunter, Architect.

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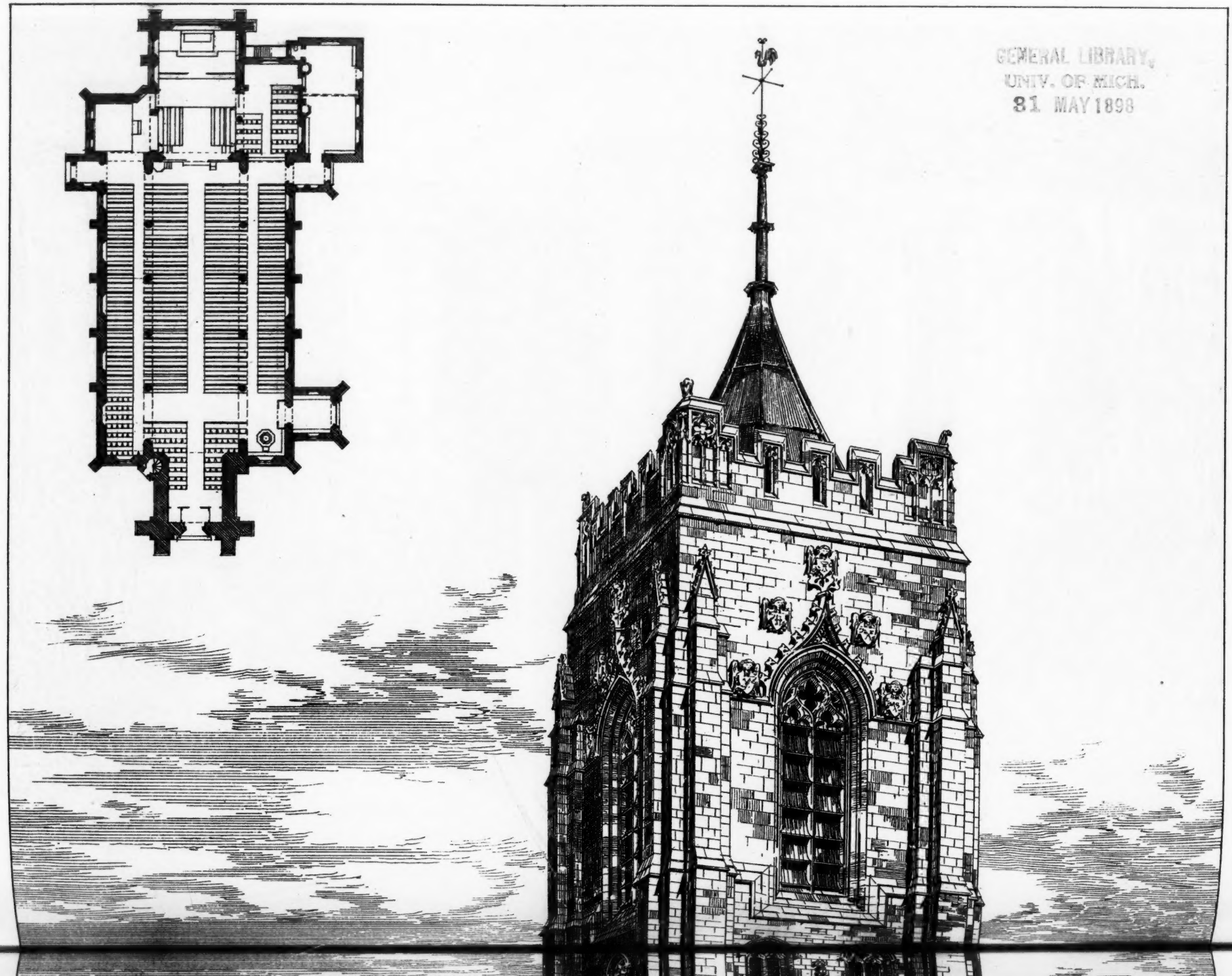

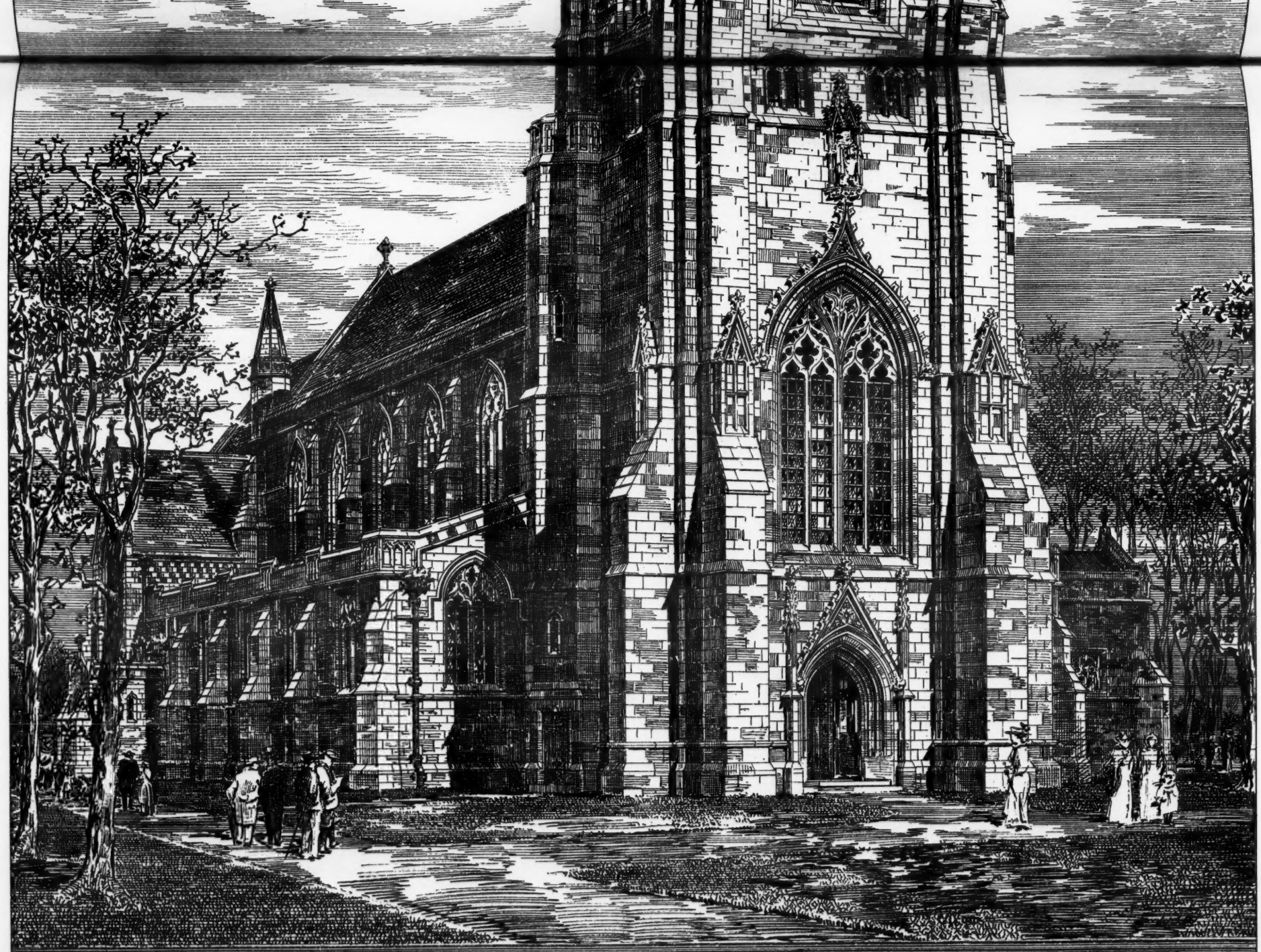

TOWER OF S. MARK'S CHURCH, HARROGATE.

J. Oldrid Scott, F.S.A. Archt.
35 Strand Gardens, London.

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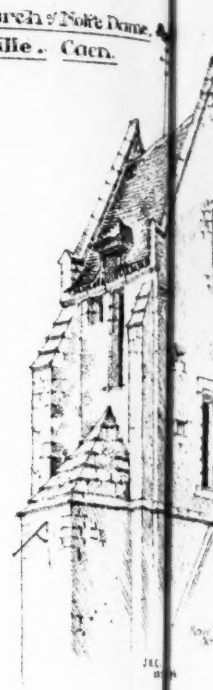
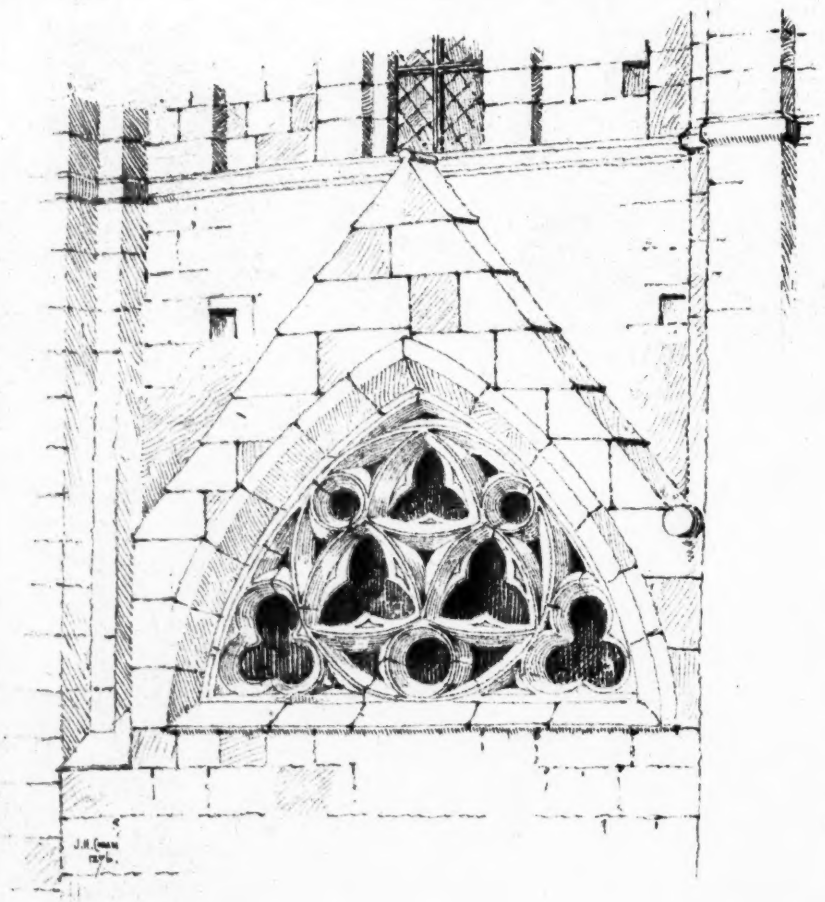
Church at Heronville.
Caen.

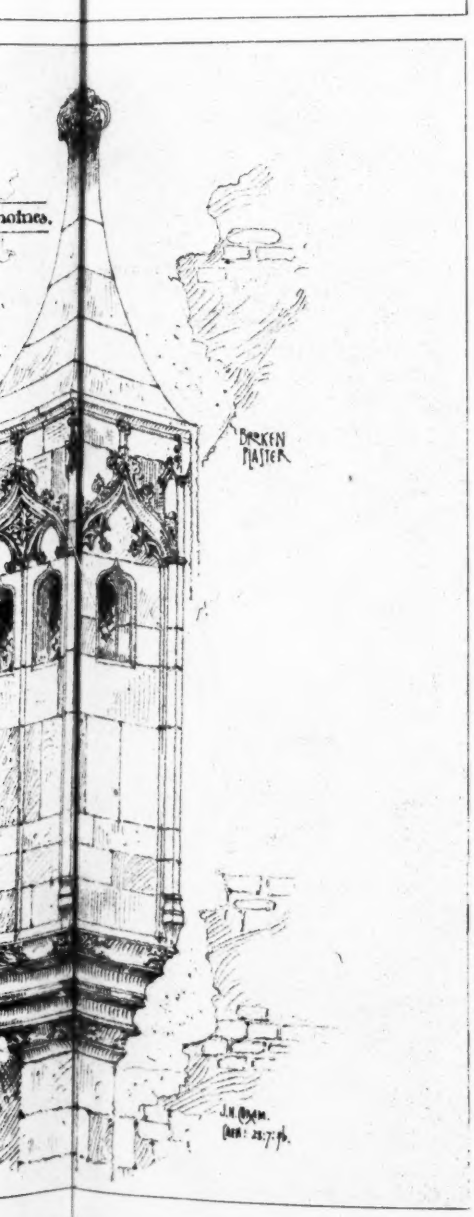
Old Church of Notre Dame.
Bretteville. Caen.



Window in Heronville Church near Caen.



Oriel, Rue-des-Chanoines.
Caen.



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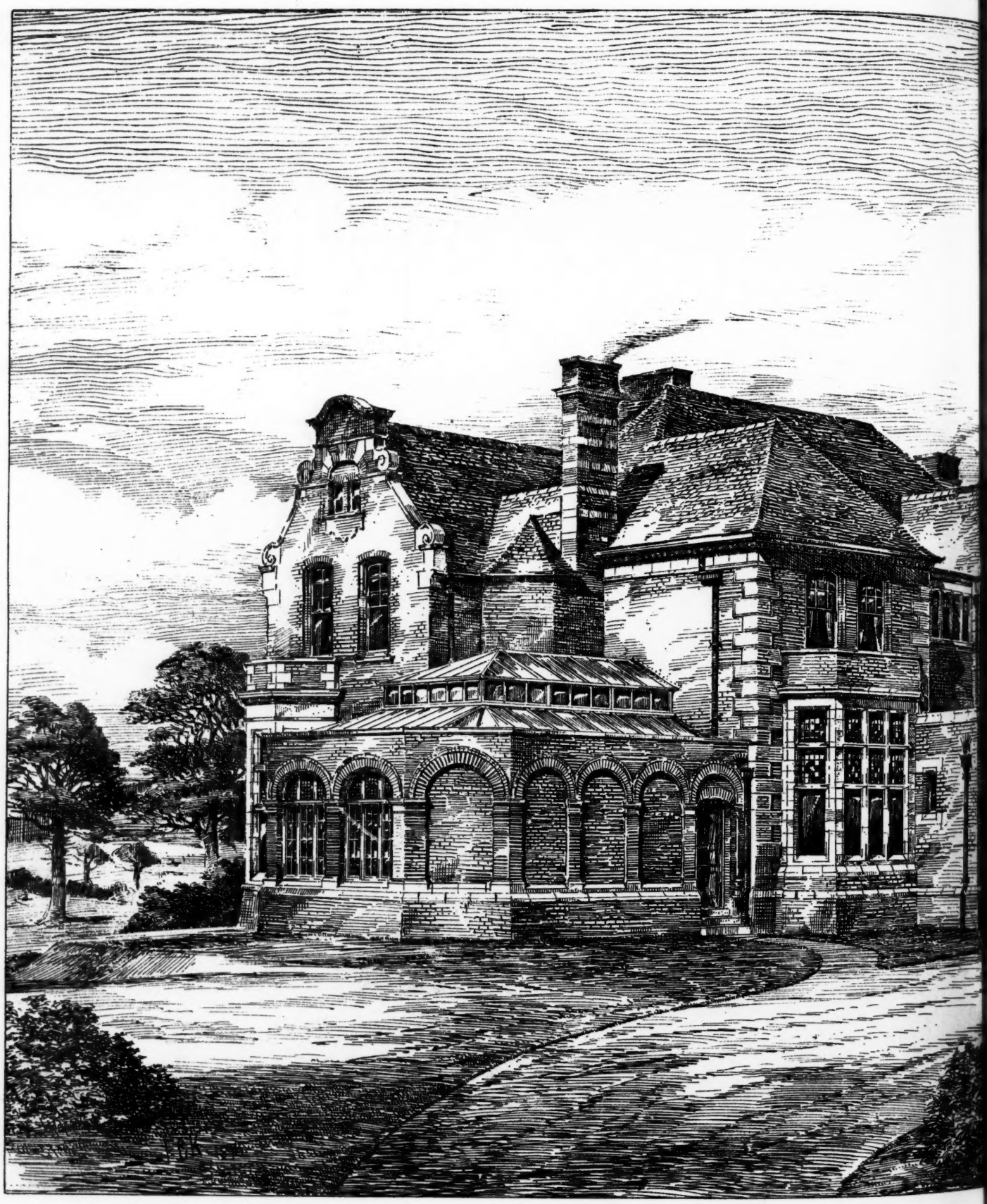
IBOURHOOD OF CAEN.—By Mr. J. H. Coram.



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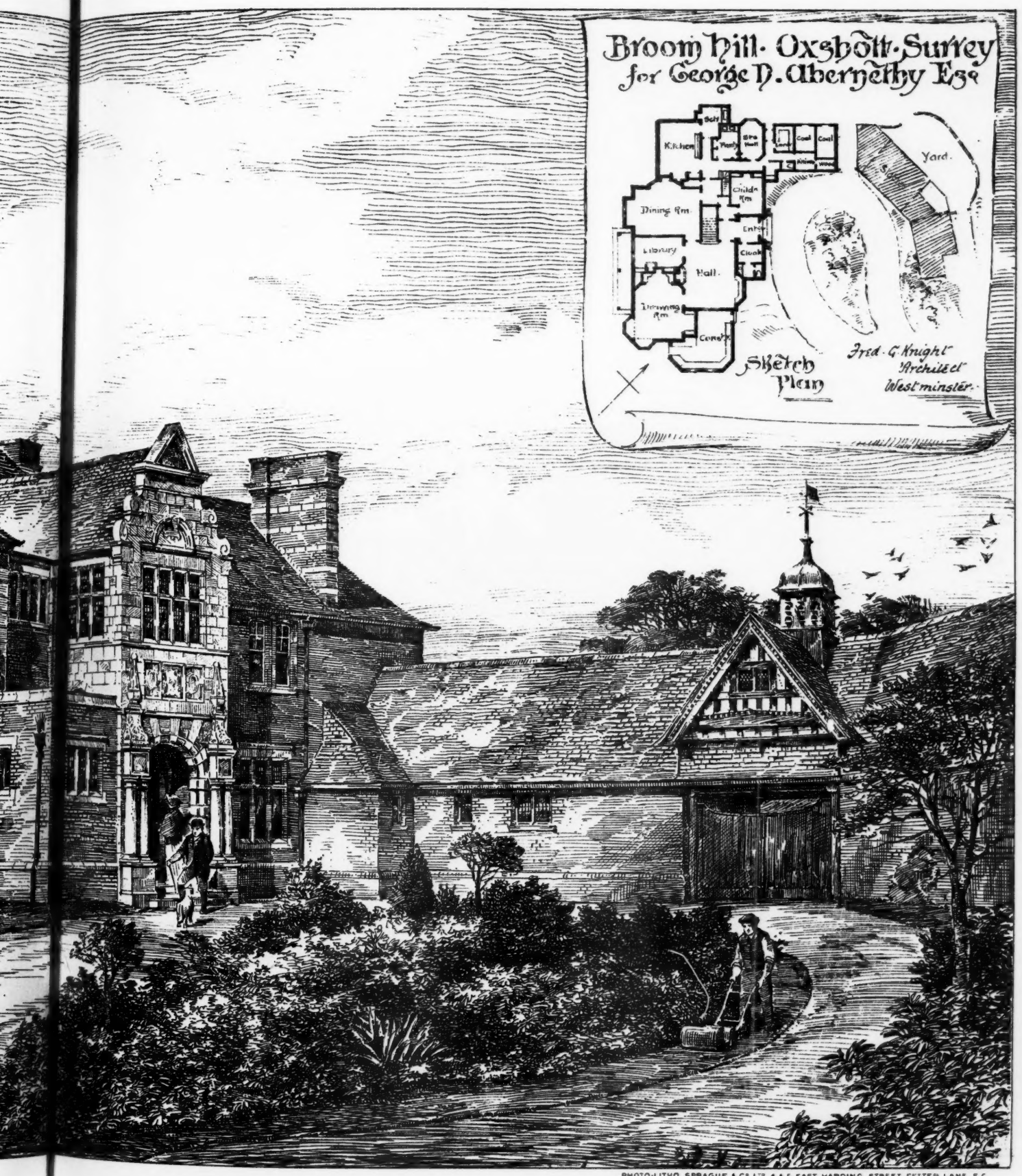


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